

earth•garden

AUSTRALIA'S QUARTERLY JOURNAL FOR THE GOOD LIFE

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*climbing beans
can sprawl*

TANYA'S SECRET GARDEN

lettuce begin

JACKIE'S ANIMAL MAGIC

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self-watering pots
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see page 92*

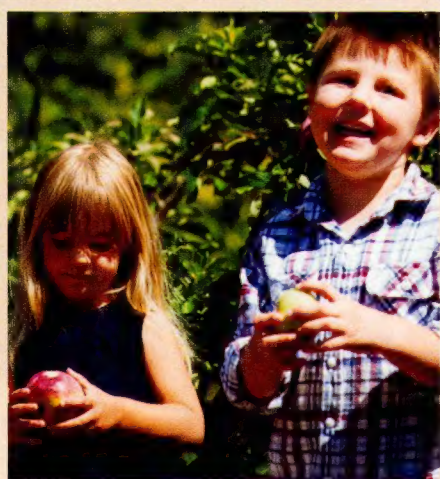


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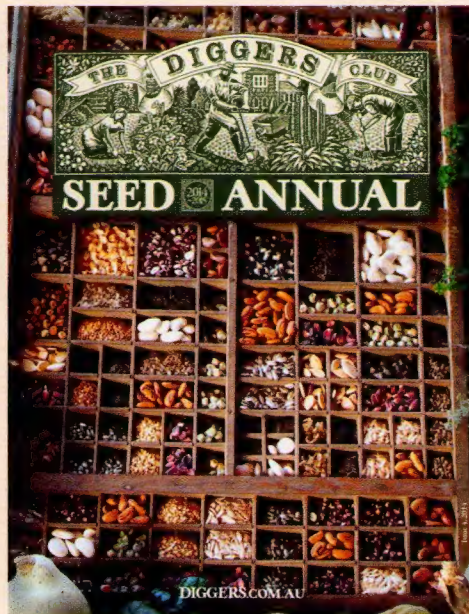
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Clive Blaze and Jane Varkulevicius

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NUMBER 170 DEC 2014–FEB 2015

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EARTH GARDEN is Australia's original journal of sustainable living for householders seeking a more eco-conscious lifestyle. For more than 40 years the supportive network of Earth Gardeners has been guiding and reflecting the movement away from high-consumption lifestyles.

CONTRIBUTIONS to EG are welcome. Stories must be no more than 700 words, good quality photographs are required. Please email editorial@earthgarden.com.au for the full Submission Guidelines.

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DISTRIBUTED by Network Services, EG is also available to buy as an emag. Search 'Earth Garden' in the Appstore: iTunes or Zinio

EG is printed in Australia under ISO14001 Environmental Certification. The cover is printed on FSC® (Forest Stewardship Council) certified paper. The text is also printed on FSC® certified paper. The paper mill also has ISO14001 environmental management system certification. You have our assurance that the magazine in your hands is printed according to rigorous international standards of traceability and environmental management. These pages are elemental chlorine free, and our words and pictures are printed with non-toxic, vegetable-based inks.

Printed in Australia by Printgraphics, Melbourne.
rod@printgraphics.com.au



Published by Earth Garden Pty Ltd

©2014 by Earth Garden Pty Ltd
ACN 086 043 567.

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Jill Redwood explains the importance of mulching.

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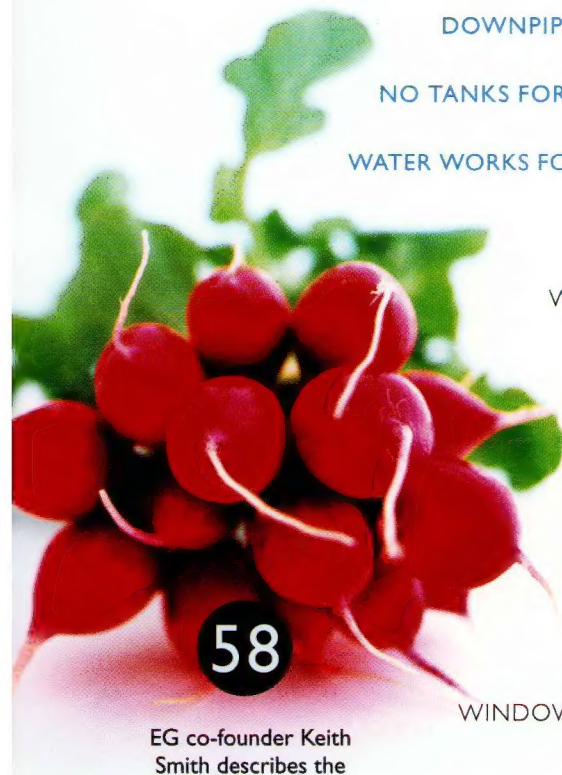


66 Gary Thomas learns to cook Chan Koay Teow in Penang.

FRONT COVER: Environment student, Billy Smith checks climbing beans at a community garden in North Fitzroy, Melbourne. Read the case for letting climbing beans sprawl, on page 68.

BACK COVER: Photograph by Brydie Piaf, at her local community garden in Randwick, NSW.

in this issue



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EG co-founder Keith Smith describes the delights of radish.

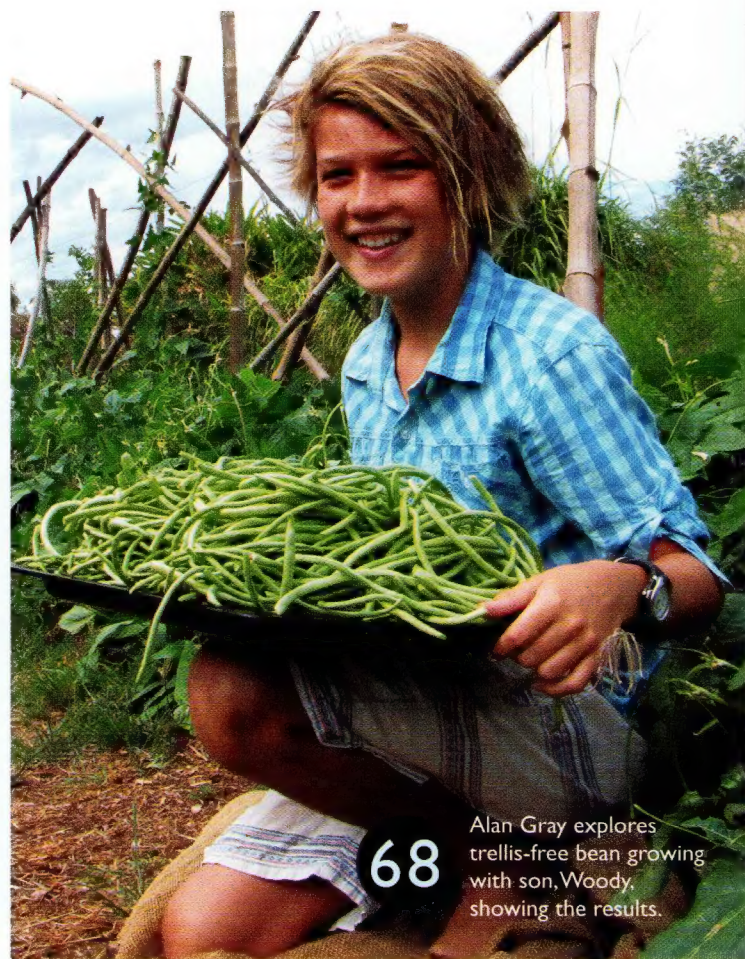
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SPECIAL
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Liz brings some dodgy science to the art of productive wicking beds.



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Alan Gray explores trellis-free bean growing with son, Woody, showing the results.

Dear readers,

Welcome to the summer issue of *Earth Garden*. I bet most Earth Gardeners have already felt the sun warming their skin this season, or sweat under a straw hat as they toil with excitement over a new garden bed, or that manic thirst only a summer's day can bring. Perhaps you've been rendering a new backyard wood oven, or building a new chook shed.

I was just reading a comment in 'Earth Mail' about experiencing only a Wet and Dry season in northern Australia. Before living in Broome I would have agreed entirely. I said I loved the distinct differences of the four seasons down south. But now, having lived in Broome off and on for more than ten years I realise I love the six seasons the local traditional Aboriginal owners, the Yawuru people, have recognised for thousands of years. The six seasons in this arid tropical climate are so distinct it seems almost strange to talk about just the Wet or Dry.

As I write this we're at the end of Wirlburu, the season following the cold, windy months of Barganna — the main part of the Dry. Wirlburu runs roughly from the start of September to the start or middle of October. It's characterised by warmer nights and days than Barganna, but most obviously by the start of the sea breeze kicking in against the desert winds of Barganna. The sea

breeze often starts about mid-morning and can drop the temperature six degrees or more in a matter of minutes. The humidity increases slightly and it's wonderful camping weather because the nights aren't cold now, and the days aren't yet too hot. Some friends say this is their favourite season in the Kimberley. Our 17 year old son, Bert, just got his licence last week, so it was off to a remote beach on the peninsula camping for him, Woody, and three mates last weekend: fishing, campfire cooking, and falling asleep under the stars to the sound of waves rushing up the beach thanks to giant, full moon tides.

Wirlburu is the time when Judith and I are managing the big transitions from a food garden focussed on traditional European vegies like broccoli, beetroots, carrots, and rocket, to those that thrive in the warmer weather. We've just planted a new bed of kumara — the purple-skinned, white-fleshed sweet potato that drives our family crazy. Whisper "kumara" into the ears of my kids and they'll start groaning, demanding a date for the first harvest roasting. The water spinach, pumpkins, watermelons, cucumbers and rockmelons are all thriving now.

I hope your warmer weather daydreams have already turned from anticipation into reality, and I hope this energetic summer issue of 'Earth Garden' helps bring your projects to fruition.

Happy reading,

Alan



The purple-skinned, white fleshed 'kumara' sweet potato is the Gray family favourite.

Illustration by Adelaide Gray.

PS: check out earthgarden.com.au from 1 December for a video welcome to our summer issue.

Write in and you could win a copy of *City Permaculture Volume Three*.

Email: editorial@earthgarden.com.au or Mail: PO Box 2, Trentham, Vic, 3458.

TOP PICK

INSPIRED TO TEACH THE YOUNG

Dear Editor,

I'm only new to *Earth Garden*, but on the RARE occasion I get to sit and flick through the journal (generally when my baby enjoys a solo nap), I feel inspired.

I was particularly taken by Jackie's article 'Grow for the Young' in issue 167. As a pre-service teacher and a new mum, I am at the frontline of battling ideologies. My passion for natural learning and parenting is constantly challenged by friends, family, mentors and colleagues. My experience in schools is small, but it very quickly taught me not to do things differently and that learning is only to happen

inside, because learning outside is too difficult. I had almost given up on my dream of becoming a teacher, with my own group of kids to learn with, until I read Jackie's article.

I too dream of a school where fruit vines grow on walls. Where students who have no lunch need not go hungry, because there is an abundance of fruit and vegetables at their fingertips. I dream of classrooms where the dominant sounds are of children chattering away, discussing their own ideas. I dream of school days where students sadly sigh when the bell goes because they have experienced so much joy of learning in and about nature.

I know many, many people will tell me the system will beat this hopeful

optimism out of me, or that I won't change the system. I don't doubt that my teaching career will be a challenging journey, but I think I'm not alone when I say I must try, for what else can I do? I hope in a few years time I can write back to *Earth Garden* with stories of students learning about nature and the world from firsthand experience, as well as the immense joy that being part of nature and learning naturally bring.

For now I will file away my *Earth Garden* copies and keep Jackie's article close by, so when things get tough, and I feel like I want to throw in the towel, I will know that I am not alone, that people do want change and I have a community behind me.

Belinda Stafford

DIGITAL EG

Dear *Earth Garden*,

In response to Danielle (Earth Mail EG168), I too have noticed the smell of the new look *Earth Garden*. Non-toxic doesn't necessarily mean odourless, and some of us are more sensitive than others. Try wearing a mask, or putting a sheet of clear cellophane over each page to read it more comfortably. It would be a shame to have to give up such a great magazine.
Joy Wellings, Daylesford, VIC

Thanks Joy. Alternatively, readers can subscribe to Zinio and download the digital version by visiting the App Store in iTunes, or zinio.com, then searching 'Earth Garden'.

— Viv

THANKS JACKIE

Hi EG,

Fantastic info — my daughter will love it. Thanks all, especially Jackie French.

Louise Turner, Aldavilla, NSW

MORE TINY HOUSES

Dear Alan and Judith,

I was very interested to see the EG167 article about the Tiny House Movement. Not long back American Dee Williams was on an ABC RN interview about her own journey that resulted in her building her own tiny home on wheels. Dee produced an excellent book (with photos) about that journey, *The Big Tiny*, which I highly recommend. Dee is

a teacher and sustainability advocate. She co-owns Portland Alternative Dwellings (padtinyhouses.com) and runs workshops on tiny houses, green building and community design.

Ian Brothers, Grenfell, NSW

ORGANIC TV

Hello there,

I just wanted to write and say what a pleasure it was watching the short video clip Alan has made. Gosh he seems very calm. After reading, in each issue, about the garden he and Judith have been growing, it was really lovely to see it. Those close ups of the beetroots were delicious. Watching the clip makes me

EARTH MAIL is an open forum. The views expressed in letters from readers do not necessarily reflect the opinions of *Earth Garden*. Letters are always welcome, but please keep them concise. Good quality photos are also welcome.

EG IS EVERYWHERE! You can link up with other Earth Gardeners on The Path forum, Facebook, Twitter, Instagram, Google+, YouTube, Vimeo and the Earth Gardeners community group on Facebook. Go to earthgarden.com.au for all the social media links.



Beetroots from the Grays' garden: "we like them on wood-fired pizzas with fetta!" says Alan.

think how wonderful an *Earth Garden* program would be to watch. Real organic television ... I live in hope.

Megan

Hi Megan,

Thanks very much for your warm comments and we agree on those stunning beetroots! Readers can check out Alan's 'Spring Welcome' clip via our website: earthgarden.com.au.

— Fiona

GINGER CELEBRATION

Dear EG team,
Earth Garden provides me with new areas to explore once again! Many thanks to Brydie Piaf for her ginger beer recipe (EG Autumn 167). We now have a 'ginger mother' on the kitchen bench and are bottling up for a celebratory fizzy drink at our housewarming. Looking forward to trying out the sourdough recipe from the winter edition!

Myf Appleton

PURSuing THE THREAD

Dear Friends,
A very belated but a GREAT BIG THANK YOU for the pile of publications you kindly sent to me — the winter evenings will be filled with reading and study! As our years race by, the more we read and try to understand, the more there seems to be considered. I guess most who have or use a computer list their queries, so that on the next occasion when the toy is used, pursuit of the interest or query can be made. For me the classic ones recently were to follow up on the idea of steam weeding and then the possibility of electrocution of weeds.

As always so very many things fascinate and require the little grey cells to be stimulated. Regarding the note on 'Organic farmer stands against Monsanto

GM'. Years ago there was a report of similar problems in the USA when Monsanto actually sued the farmer whose grain had been contaminated, because, I guess, he had used GM seed without their authority, when actually he had used his last season's seed for his next crop! Thank you again, best wishes to all.

Roy Banks



Mansfield students cultivate their garden.

SCHOOL GARDEN SNAP WINNER

Class 3/4 students planting their hardy leafy green seedlings in the new mandala gardens at Mansfield Rudolf Steiner School in Victoria. Students Eligh, Tom, Lili, Abigail, and Angus with school gardener, Pat.

Lou Pullar, Classroom Teacher

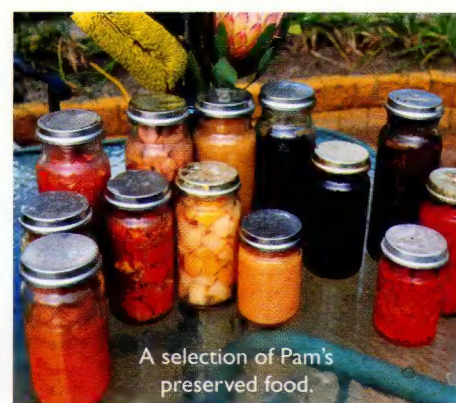
Congratulations Lou! You've won a swag of Earth Garden back copies to share with the class.

— Fiona

PRESERVING THE HARVEST

Dear Earth Gardeners,
As a child in the suburbs of Adelaide my favourite time was summer, picking apricots and helping Mum to bottle them. Our family formed a little production line, and as the youngest of three kids I had simple duties. I still get a buzz from being old enough to pack the jars now. I love looking at my preserves and the sense of achievement this instills in me. It is wonderful to be able to grab a jar of mulberries in winter to take to a neighbour for dinner, a gift from my garden at any time of year.

Many people of my generation (I'm in my 40s) are overawed by the thought of bottling or making jam and yet it is relatively simple once you've been



A selection of Pam's preserved food.

shown the basics. I have bought several preserving kits for friends at garage sales, then run a workshop for them to ensure they are comfortable using the steriliser. It can be easily self-taught from the book that accompanies most Fowlers Vacolers sets.

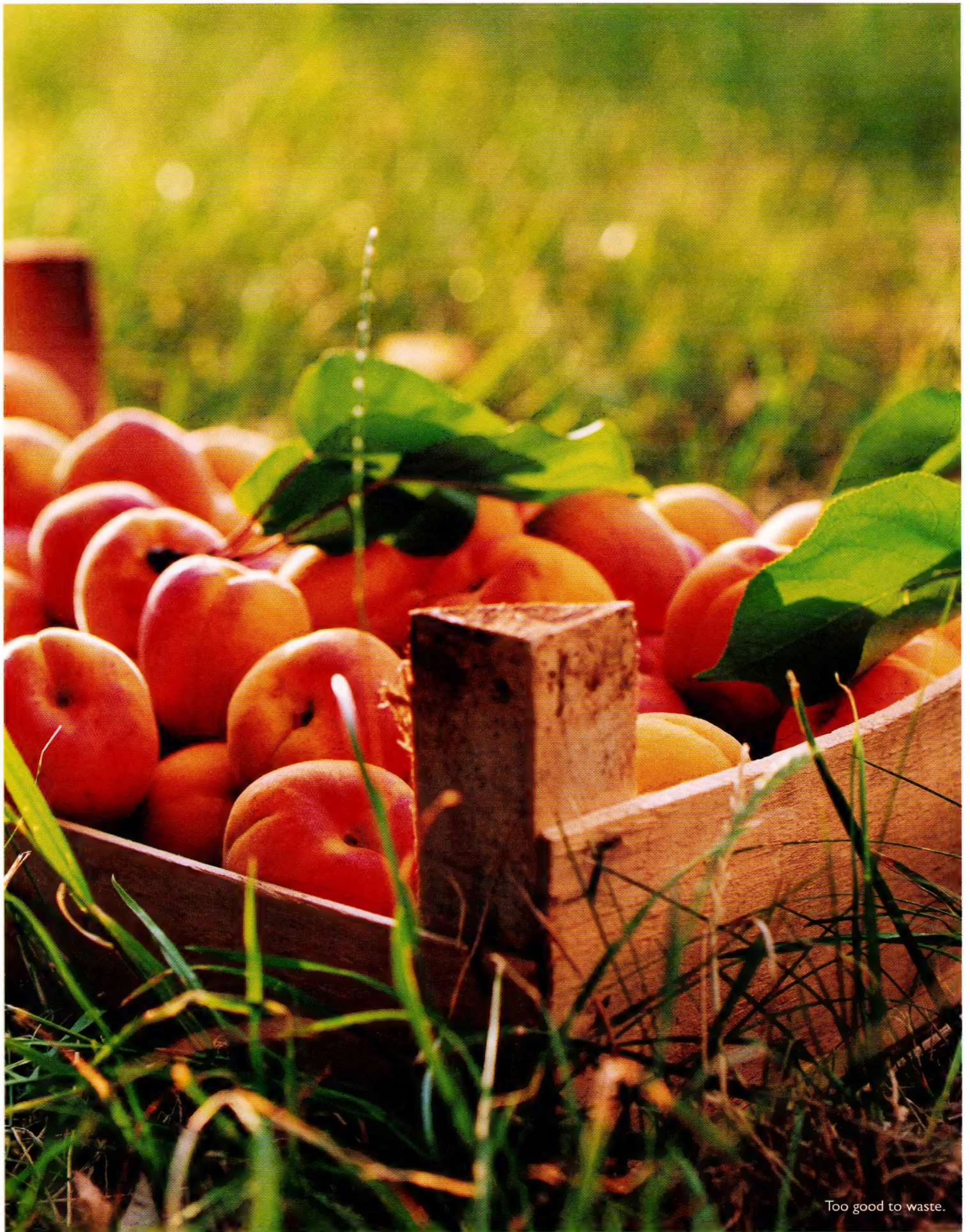
The jars come in different sizes, I try and choose one diameter so that the same lids and clips fit on all the jars (saves space when storing), and then collect small, medium and large heights. You don't want a huge jar of some things. I prefer stainless steel lids as they last and don't rust — look out for them secondhand as they are expensive. You only need enough clips to do two batches of preserves (this is determined by the size of your unit), as you leave them on for 24 hours then remove and use again. They rust but last forever, if kept dry when not in use. Rings can be purchased online or at selected hardware stores (sadly not in supermarkets these days). The rubber rings can be reused despite the manufacturer's warnings, just check for distortion of rubber, cracks or brittleness each time you use them.

Pam Thoday, Padthaway, SA

ANOTHER WASP SOLUTION

Dear EG,
Regarding European wasp traps as featured in *Earth Garden* 166 ('Jill's How to'), we had to develop such a method last summer, when European wasps formed a nest in our garden — only 15 metres from our beehive. The insecticides conventionally used to destroy the insects are also seriously lethal to bees and we have free ranging chooks who would also have been at risk of poisoning.

The nest was underground, under a heap of wood, and it had a couple of



Too good to waste.

entrances, which looked like fissures in the ground. We cleared the wood away by night, and managed to destroy the whole colony by pouring 80 litres of just-boiled water into the entrances. We did this at night after all the foraging wasps had returned to their nest. We wore our bee suits and worked by the light of torches covered with red cellophane (wasps and bees don't see red).

In the morning, there was no wasp action, and we dug up the nest, revealing a muddy comb (a bit like bees' comb) filled with the wasps' brood (the chooks were very happy about this bit!). The nest was only a couple of months old and not yet extensive, so the 80 litres were possibly overkill, but really, with something like this, you want to do the job completely. Warmest wishes,
Alexis Harley



Elva-Ray grows with the garden.

SUSTAINABLE LIVING IN PORTLAND

Hi *Earth Garden*!

We have made the most of the rich soil, cool climate and easygoing lifestyle that Portland, in south-west Victoria, has to offer. Growing everything from kohlrabi to kale, tomatoes to tamarillos we aim to eat from our backyard all year round. Living in this small town has many benefits! When we have an abundance of pumpkins, beans or eggs a friendly neighbour is always happy to trade so we always have a great selection of homegrown produce. As a birthday gift Matt received a year's subscription to *Earth Garden* a few years ago. It has started a love affair with this awesome and educational magazine! Happy horticulture,
Matt, Jess and baby Elva-Ray Cook



Making the most of a perfect blossom.

WISH COMES TRUE

Dear EG,

I live on an ex-commercial orchard near the town of Stanthorpe in Queensland, and we have lots of different fruit trees. The picture is of a honeybee on a prune plum blossom — plum trees have the most perfect blossoms of any of the fruit trees. I'm excited about winning the *Gaia's Garden* permaculture book as it's been on my wish list for a long time!

Michelle

Michelle was the deserved winner of our 'Show Us Your Blooms' Facebook competition. What a fabulous shot! Like our EG page and stay tuned for future giveaways, interesting snippets and news posts.

— Fiona



Chris, his mother-in-law and two daughters in action.

GAZELLE E BIKE WINNER

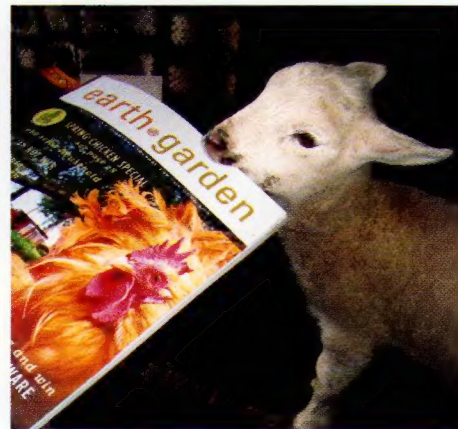
I gave EG to my mother-in-law/Her Roundup addiction frankly a bore/Now she's got a greywater reedbed/And has plans for a strawbale shed.

Chris Brown, Deniliquin, NSW

Chris entered and won our 'Share The EG

Love' competition in our Winter edition. He is now the proud owner of a premium Gazelle electric bike — congratulations Chris!

— Fiona



Dear *Earth Garden*,
Even our poddy lamb likes to get her teeth into your mag.

Di Bott

FROM THE PATH

What season are we in?

Some would say we are part way into spring in August; some have even felt summer conditions then. Dr Tim Entwisle, director of the Royal Botanic Gardens in Melbourne and the author of *Sprinter and Sprummer*, says maybe we are in 'sprummer' starting 1st October and going through November, while summer would span December through to March. April and May would be autumn and June and July would be winter, while 'sprinter' runs from August to September.

Does that make sense to anyone else? It might be easier to explain the seasons away from a typical European set of four well-defined seasons. Those in northern Australia basically talk about a wet and dry season not knowing what a real winter's day feels like, or autumn, or spring.

According to Dr Entwisle, Aborigines had six to eight seasons. For anyone who has lived on this land for more than a few hundred years those four seasons don't make sense.

Jim C

A REPLY

At the moment I think we are going back and forth between sprinter and sprummer. Round-the-bend



Photo by George Hirst, crankycurlew.com.au.

SANDY SALUTE

A Townsville environmental group has made a visual protest — against the Australian Government's appalling inaction on climate change — that garnered admirers from all corners of the globe.

Creator, George Hirst from crankycurlew.com.au, told *Earth Garden*: "We wanted to make a statement that should be shared far and wide for an issue that we see as a planetary emergency. We are hoping other towns and cities will take up our idea and create their own heads buried in the sand events. Perhaps your readers will want to try it. We can provide advice on how to do it safely if required".

The group's caption sums up the

national mood perfectly: "Townsville salutes . . . the Australian Government for their achievements in combating climate change". George says their image was modified. "I want to make this clear. What I did was to simply relocate some of the 'bodies' into a better, more balanced, composition. Absolutely no extra figures were added to the 80 people who participated in the photo," he said.

Regardless, it's a stunning image that captures the state of play perfectly. Perhaps we need an International Day of Heads In The Sand each 5 June till we get concerted global action? Sydneysiders have responded, organising a Bondi Beach version on the eve of the G20 meeting on 13 November.

KIMBERLEY LAW BOSS POSTHUMOUS AWARD

The Bob Brown Foundation presented its third annual Environment Awards at a ceremony in Hobart recently. It's hard to think of anyone in Australia better placed, or with greater authority, to make an environment award than Bob Brown. *Earth Garden* has watched many companies, governments and organisations hand out 'gongs' for environmental work, but sometimes these awards are more about PR for the awarders and the awardees than anything substantial. The Bob Brown Foundation may be the most prestigious award for any environmentalist to be awarded.

The 'Environmentalist of the Year 2014' was awarded posthumously to

Margie Cox, with
her daughters
Rekeesha and
Kerstin Roe, and
Bob Brown.

Photo by Kevin Kucks.



Joseph Roe, a Goolarabooloo man from Broome, for his lifelong work to protect the environment and cultural sites of the Kimberley. In presenting the award and \$4000 prize money to Joseph's wife, Margaret Cox, and daughters, Rekeesha and Kerstin Roe, Bob said, "Remove law boss Joe Roe of the Goolarabooloo people from history, and the massive gas factory planned by Woodside Petroleum for north of Broome would by now be wrecking the Kimberley coastline, including the world's largest humpback whale nursery, the world's largest dinosaur footprint and traditional burial and ceremonial sites."

"I was struck by this man's integrity and defiance of the odds to save the country he loved. Roe defied the money, arrests, threats and compulsory acquisition of his people's land for a higher goal: the integrity of Aboriginal culture and the Kimberley's remarkably pristine environment. He died within months of gaining victory for his country but his fighting spirit remains to inspire everyone else faced with the destruction of country or neighbourhood."

Says *Earth Garden* editor, Alan Gray: "Everyone involved in this campaign has clear memories of Joe: defiant, proud and leading his people. I remember Joe sitting in my back garden just over a year ago, enjoying Steve Pigram, my sons, and Rory MacLeod, jamming together. That day at the Saltwater Festival my boys had played the great tribute song to Joe, written by *Midnight Oil* drummer Rob Hirst*. Of course, the locals had loved the song. I feel lucky I had the chance that night to thank Joe for putting his life on hold as he fought Woodside, the WA Government and an army of corporate lawyers intent on destroying his land and culture. His modest, gracious acceptance of my thanks stays in my mind, as does the power and elegance of Bob Brown's speech at Joe's funeral."

Joseph (Joe) Roe was born in Broome in 1966, the youngest of nine siblings. He spent his childhood under the guidance of his grandfather, the late, great Paddy Roe at Jilburnon and Millibinyarri. Paddy taught Joseph about the importance of his law and culture, respect and protection of country.

As a teenager, Joseph attended

Nulungu College in Broome, but realising school wasn't for him, returned to live with his grandparents in the bush. In 1983 Joseph met Margaret and they had two daughters, Rekeesha and Kerstin. They moved to Millibinyarri so their children would grow up and live their cultural way of life in the bush.

During this time, Joseph established the CDEP program and his whole family took part in improving their community. Although very busy, Joseph would still find time to drive out to country to ensure no damage was being done to the environment and cultural sites. He fought for many years to try and stop motor bikes and vehicles driving over the sand dunes, and installed bollards to prevent traffic destroying burial sites and the environment from Broome to Bindiangoon.

In 1988, his grandfather Paddy Roe, established the Lurujarri Walking Trail, to look after the country between Minyirr and Bindiangoon. Since then, Joseph and his family have welcomed thousands of visitors, Australian and international, to walk, camp, fish and share traditional knowledge and stories

along the way. In 2013 the community campaign led by Joseph and the Goolarabooloo people against the giant gas hub at Walmadan (James Price Point) finally prevailed, with the proponent, Woodside, withdrawing their plans.

Joseph died in 2014, aged 47 and is survived by his wife Margaret Cox and daughters Rekeesha Roe and Kerstin Roe.

• Go to <http://www.bobbrown.org.au> to see a short video profiling Joseph.

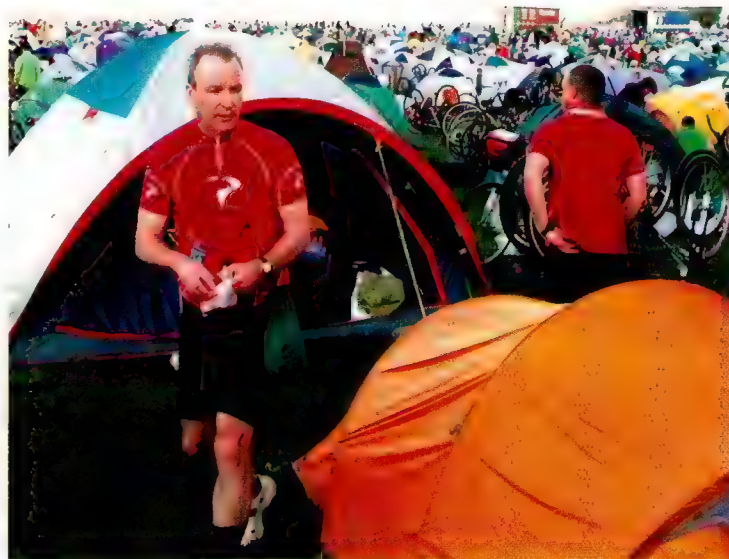
*You can watch Rob Hirst's music video online: go to youtube.com, then search 'Rob Hirst, Dom Turner - Joseph Roe'.

GREEN HUMAN RIGHTS BARRISTER RECOGNISED

Brian Walters QC has been awarded the Victorian Bar Pro Bono Trophy for his consistent *pro bono* commitment over more than 30 years to environmental law and human rights.

"Mr Walters has worked for long periods *pro bono* over the course of his career, on matters ranging from police misconduct at a protest in 2010 at the Beverley Uranium Mine in South Australia, human rights principles relating to the Tyler Cassidy Coronial Inquest, leading the team fighting the deportation of Stefan Nystrom who had lived in Australia since he was 25 days old, defending environmental and peace protestors (including former leader of the Greens Bob Brown, and Neil Smith aka 'Hector the Protector'). He has led cases challenging issues ranging from legislation excluding the public from forests, subpoenas to psychologists and counsellors to disclose information in sexual assault cases, and freedom of information. Mr Walters is an exemplar of the culture and tradition of *pro bono* at our Bar," said Mr Will Alstergren QC, Victorian Bar Chair.

"More than 1000 barristers in Victoria signed up formally to the Bar's Pro Bono scheme. Individual barristers were nominated by their peers at the Victorian Bar, who have noticed them working for nothing on cases ranging from taking on big banking and mining interests, to marriage equality, the protection of Indigenous burial grounds, and the rights of asylum seekers, people with disabilities, those experiencing homelessness or trying to



Brian Walters QC, and a Director of the Earth Garden Foundation, prepares for a big day on the Great Victorian Bike Ride. Read about Brian's new iPad-based interactive history ebook on page 73.

access public housing, and people in the transgender and intersex community," Mr Alstergren said.

Previous recipients of the Trophy have included Julian Burnside AO QC (2010), and Debbie Mortimer SC (2011).

SOLAR CHEAPER IN INDIA THAN AUSTRALIAN COAL

The results of India's latest solar auction are in, and it's bad news for developers of Australian coal projects – solar PV is cheaper for Indian users than the electricity price needed to pay for imports of coal from Australia. A tender for 500MW of solar capacity in the sunny, south-eastern state of Andhra Pradesh, resulted in First Solar submitting the cheapest bids in an auction that was oversubscribed by more than double – 63 bids, totalling 1291MW in proposed solar developments.

First Solar submitted bids of just over 8 cents US per kilowatt-hour – \$0.086/kWh for 40MW and \$US0.087/kWh for another 40MW. In local currency terms the bids came in at INR5.25/kWh and INR5.35. That is significant, because it is below the price required to make coal imports economically viable. They also confirm that generating power from a large-scale solar plant is now cheaper, in India, than power from new-build coal, particularly those that rely on imported coal.

"Wind, solar and hydro facilities can be built faster or cheaper. Renewable energy incorporates a zero fuel cost,

such that there is an inbuilt deflationary driver – ie zero indexation. Given the recent drive by the Reserve Bank of India (RBI) to prioritise the sustained reduction in inflation, renewables support a series of Reserve Bank targets. Importing thermal coal achieves none of these goals, and more likely contradicts them," says IEEFA analyst, Tim Buckley.

He said that, while the imported coal price may come down, lowering the generation price to around 9c/kWh, there was no way developers could bank on prices staying that low, considering the uncertainty surrounding thermal coal.

This is not great news for Australian coal barons, or more particularly Queensland, which is betting on India's appetite for imported coal to fund the development of the state's massive Carmichael coal deposit and the related expansion of the nearby Abbot Point coal port. The increasingly shaky state of this Queensland coal export plan has been exposed more and more lately, with major international banks officially distancing themselves from the development projects, and signalling they would not back them financially, due to the attached risks – both financial and environmental.

—solar.org

Any news items of interest to Earth Gardeners may be submitted to **ON THE VINE**. Please send notice of meetings, festivals and gatherings well in advance of the events.

TV FREE



Anna MacDonald tells how life improved when she unplugged the TV.

WE ARE screen free. We have been for six weeks. I can now confess that our family was in the grip of an addiction. I felt like I was harbouring a dirty secret because although I didn't think of our family as TV-dependent, our private habits told another story. But from the day my husband put our television into a high, dark cupboard and I nestled our iPad and laptop in amongst my unruly pile of t-shirts in my clothes cupboard, I have been trying to control an evangelical fervour. Ditch your tellies, one and all!

We have three children. We live in a beautiful town right next to a Ramsar-listed bay. We have a pool, chooks, vegie garden, friends and purpose in life. Yet, for some time I had been ruminating, in a back-of-my-brain kind of way, on the disharmony in our domestic life; our children didn't seem to be able to spend time doing things that children in an idyllic setting are supposed to do. You know: hunt for grasshoppers in the sweet potato patch, kick a ball, read a

book. Instead, they would sit listlessly waiting for the next fix of TV.

We had limited the amount of time our children were allowed to watch screens, in response to constant high level negotiations about what, when and how long they could plug in.

We were screen free during the week, so then there was a glut on weekends.

'Down time' had become synonymous with screen time.

My husband is an advocate of TV. He likes to argue that one can learn a lot from television. He has been known to humorously denigrate my TV free childhood and refer to it as my 'time in a cave' because I missed out on some big chunks of popular culture. I had thought about not having a TV but had presumed I would have to really state my case to get the other adult in the house to acquiesce. Then one day, out of the blue, he suggested we pack away the TV. I leapt on the idea.

So away went the screens. We all

felt anxious; I was stuck in the vortex like everyone else. I wondered how I was going to cope with a screaming toddler in the late afternoon or early morning. What to do on a long, hot weekend afternoon with bored children? What about the idle foot massage I scored when my true-love and I veged out in front of the box each night? It was a very tough first world moment.

So how is it going six weeks in? Bloody amazing. Really. Our kids are playing again; with each other, on their own, and with us. I feel like our gaze as a family is on each other. I rarely hear anyone say, "I'm bored." I read books to my kids over a cup of tea, we play cards or head to our bay to catch a breeze and see if we can net some garfish to crispy fry for dinner. But I also feel a lack of responsibility for my children's happiness. They are seeking it themselves. I am revelling in their shiny, intense creativity. The surprising thing is that children will entertain

A kind of peace has entered our lives. Brains are growing, personalities are flourishing; even our couch has expanded its personality.



Gus, Tully and Will: not fussed that the telly's in the bin.

themselves endlessly and my adult input can come and go.

Family life can be intense; we had used television to lessen that intensity. Unwittingly, it made us turn away from each other instead of towards each other. Now, that palpable sense of life

force that bursts from children is a total delight. It's not a burden or something to be sedated. TV didn't calm our children down, it made them irritable and demanding because when it wasn't on they didn't know what to do with their time.

A kind of peace has entered our lives. Brains are growing, personalities are flourishing; even our couch has expanded its personality. It has assumed a more open aspect, no longer focused on the single point of the television. My daughter has just written her first

novel, my eight-year-old son can be seen catching grasshoppers to feed to the resident St Andrew's Cross spider, and my two-year-old collects piles of sticks that morph into all manner of loud, typically masculine objects all day long.

My fervour has settled into a more moderate feeling. I know that some

families can manage TV in their lives without detrimental effect. But screens had taken control of my kids and turned them into zombies. A clean break is what we needed to do and I don't think we will ever go back to life with a television.

- You can watch an interview with Anna at earthgarden.com.au from 1 December.

Now, that palpable sense of life force that bursts from children is a total delight.



"Our kids are playing again; with each other, on their own, and with us," says Anna.

THAT OL'SUMMER
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EARTH GARDEN
AGAIN



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Five star bee accommodation with vacancies.

Julia Schafer, of Gaven, Queensland, builds a cute answer to an acute shortage of pollinators in her garden.

THE NEW eggplants I grew from seed are finally sporting the most gorgeous purple flowers, but, alas, no aubergines are to be seen. The flowers bloom, then one by one they wither and drop, which is so sad considering the prolific eggplant I harvested from the previous crop (and was able to make into the most delicious Kasundi, a Moroccan-inspired chutney). Unfortunately, the evidence is clear:

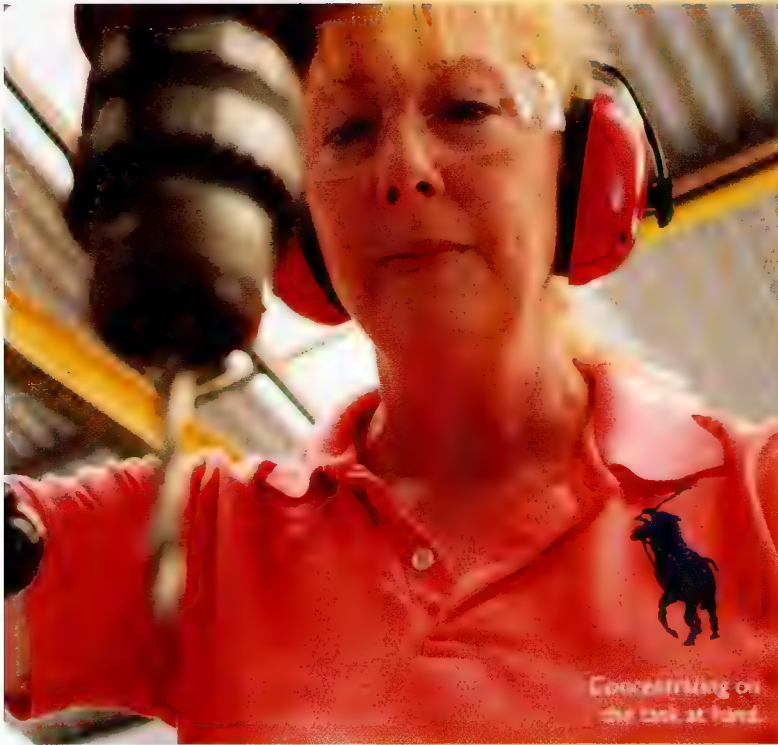
we have a distinct lack of bees in our garden.

I have been doing some research: apparently the blue-banded native bee is partial to the purple flowers of the eggplant, helping its pollination along at a great rate. So now I need to hire a bus and go and get a whole bunch of them to come and visit my place! Not really, but what I did decide to do is make a Bee B&B and see if

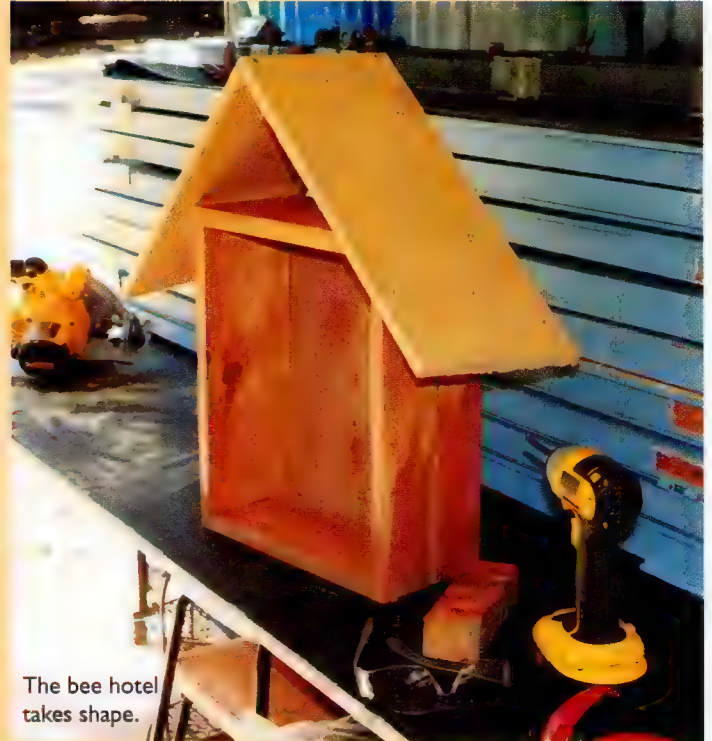
I can turn tourists into long-term tenants.

The premise is simple — you just create a habitat that is appealing to native bees. It needs to be cosy and covered with a roof to shield them from extremes of weather. The simplest form is a plank hive, which is simply a plank of wood with a series of 6–12-mm holes drilled into it, which you locate in your garden. I decided to get a little

By the time Saturday had come around I was armed with a very basic design, which quickly morphed into a more elaborate and quirky design for my Bee Hotel.



Concentrating on the task at hand.



The bee hotel takes shape.



One baseboard coming up.

Photos by Lawson Schafer

*the blue-
banded native
bee is also
partial to the
purple flowers
of the eggplant,
helping its
pollination
along at a
great rate.*



Geraldton waxflower:
bee restaurant.

more creative, as is my bent, and design a decorative piece to attach to the lone tree stump in the vegie garden.

Our couple of acres is in the Gold Coast hinterland, where recently the weather has been chilly, and frankly, apart from the eggplants, there are no flowers in our garden at all. So to help

things along I thought I would buy some flowering native plants to entice bees to the garden, like agapanthus and Geraldton wax, which will not only brighten up the space but hopefully act as marketing material for my B&B venture.

By the time Saturday had come

around I was armed with a very basic design, which quickly morphed into a more elaborate and quirky design for my bee hotel. Luckily for this project, I found all I needed around the property to make a totally recycled bee environment. The main part of the house is a salvaged wooden drawer from



All passing bees and other
pollinators are welcome at
Julia's bee B&B.



what once was our son's baby change table, which in a fit of madness my husband cut up for firewood! ARGH! The roof I made from offcuts of timber and the inside will be filled with logs, more wood offcuts and sections of bamboo stakes. I trimmed all wood pieces to sit flush with the sides of the drawer using the drop saw and, with some help from my husband to set up the drill press, I went about drilling many holes in one end of the wooden sections.

Now that the hotel and innards were ready to go, it was time to attach it to the tree stump. My husband cleverly suggested mounting it so that if it ever had to be moved I wouldn't have to disrupt any potential lodgers.

We attached a base plank to the stump, and then fixed the hotel to the plank from the underside. Therefore, removing four screws from the base will allow it to be removed intact. Brilliant!

I enlisted the help of our fourteen-year-old son to fill the hotel with the odd-shaped offcuts, logs and bamboo. He commented that all the time he had spent playing Tetris had come in handy for just this sort of occasion! The final piece is something really cute and quirky, with a motel Vacancy sign out front to let all passing bees and other pollinators know that there is a room vacant with a beautiful garden view especially of the flowering eggplant.

Now excuse me while I run off and make the beds in anticipation of the first arrival of our winged guests.

Postscript — six weeks later...

I came back from a two-week holiday to find the first smooth, shiny, aubergine orb on my eggplant bushes. Whilst I can't see any inhabitants in the Bee B&B the nasturtiums are in bloom, the medicinal lavender heady in scent and the hardy Geraldton wax showy with its petite pink blossoms all swarming with flying insects of one type or another. However, I remain hopeful that the bees will move into their new home in the coming months.

• For more from Julia check out her blog: farewellmymanicure.com.

frugality

IN FOWLDOM

Tough times for poultry keepers of the past offer lessons for the present, says **Alanna Moore** of Castlemaine, Victoria.

BRITISH poultry keepers during World War Two, who were forced to get creative with meagre rations, pioneered an inexpensive poultry diet that is good for all-round sustainability.

The economics then were quite different. The initial outlay on setting up — buying stock and providing housing — or most of it, suggested a book on the subject, “will be paid for in

the first year of lay, out of profits from eggs over food”.

My experience is that poultry are rarely profitable and can be an expensive hobby! When I kept over a hundred birds, including many different rare breeds, I kept careful records of costs and profits from selling cartons of multi-coloured eggs, plus a few chicks and point-of-lay stock. Selling rare breeds

earned top dollar, plus I reduced the feed bill with weekly trailer loads of broom millet waste, full of edible seed, from a broom-making factory.

But profit-wise — I still only broke even. Of course, there is extra value from the scratching and gardening activities of poultry, plus their potent manure can put a rocket under your plants.

But on a tight budget, how to cut





the feed bill without compromising health and productivity? A 'frugalvore' diet can involve growing food for them, foraging, and making the most of other people's waste. And it doesn't have to be a frugal bore!

GREENS

Fresh grass is excellent and helps maintain lovely yellow egg yolks. If you must have a lawn, let your birds graze on it. Mown grass, no more than 10 cm long, can also be dried and used when needed. Spread it thinly on a floor or Hessian, turning it a few times over a couple of days until well dry before storing.

GROW

Grow sunflowers, maize, potatoes, carrots and all manner of greens for your birds. Potatoes, steamed and mashed can be a substitute for grain and are good for up to 50 per cent of rations. Don't forget all those slugs, snails and bugs out there. Ducks, in particular, will relish them!

GLEANNING

Ask your local greengrocer (another rare

breed) to give you vegetable trimmings and fruit throw outs. (But don't feed birds anything that's mouldy.) So they don't get trampled, hang or rack them off the ground. Raw is best, but minced or chopped and cooked up with meat scraps can also be good, when added to commercial mash.

Bread waste from a bakery can be soaked and included in a mash too. But don't give them too much, especially the nutrient-deficient white stuff.

PROTEIN

Fish scraps are an excellent protein source. Think of the carp infesting Australia's waterways — these can make a perfect addition to the frugalvore diet. Ideally, cook up fish scraps in a pressure cooker to reduce them to a pulpy mush. Or simply boil for ten minutes and put through a mincer. Up to ten per cent of the diet could be fish waste, but any more and you risk having fishy tasting eggs!

Birds need feed with around 20 per cent protein in order to produce a good crop of eggs. If you don't have meat or fish scraps, sourcing protein is often tricky. But homegrown sunflower

seeds (feed the head whole) and peas and beans can do the job.

ACORNS

A more unusual food source is the acorn, once a mainstay of the early human diet. Acorns contain about 6 per cent protein, lots of calcium, iron and fat, and they can be abundant at summer's end under the European oak trees that thrive in Australasia. But overfeeding acorns can lead to a drop in egg production, reduced iron levels and dark yolks, so best to limit them to 20 per cent of rations.

Reducing the high level of tannins is a must. Crush or crack acorns (use only undamaged ones) — you might drive a vehicle over a sack of them — and then soak them in several changes of water, until the water runs off clear. Feed immediately, or dry and store them. Likewise, crushed beechmast (nuts) from European beech trees can also give birds free protein (but without the tannin problem).

Happy frugalising!

Reference: *Keeping Poultry and Rabbits on Scraps*, Claude Goodchild and Alan Thompson, Penguin Books, 1941, UK.



Resourceful fowls
and resourceful
owners: win-win.

I'M AN ANIMAL TOO²

Jackie French, from Braidwood, New South Wales, reflects on the natural world and how we live with it.

“HE'S AN ANIMAL,” they said, of the man who murdered his three children.

I have never met an animal that killed its children, though I've known a dog that ate her dead puppy, a way to stop other predators from eating her other young, and a wombat whose mothering techniques

left a semi-circular white scar that her baby still wears today.

“Surprise your man and show him the animal within you in bed.” Thank you, I don't want 30 seconds of stallion, nor stud ram despite their look of long-nosed lechery. Wombats run, snarl and bite before their mating, except for Phil this year, who

lured his female with carrots then did the deed while she ate them. She appeared to weigh up the advantages of carrots versus the nuisance of Phil. The carrots won, by a whisker, and for the next two nights too.

And yet, I am still an animal. All of us are — whether we get about on two legs or four or eight or none.



We are all happier on a deeper level with life around us, not just our own species, but plants and animals too.

A young child with dark, curly hair is shown from the side, leaning forward and watering a garden bed. The child is wearing a blue long-sleeved shirt with a colorful pattern on the sleeve, dark pants, and blue rubber boots. They are holding a silver metal watering can with a black handle and a black spout. The garden bed is filled with various green leafy plants, some with red stems. The background is a blurred green landscape with trees and a wooden fence.

Every child has the
right to plant a seed
and pick a fruit.
a vegetable.
a herb.



Add pot plants to offices and you get fewer sick days, and not just because some plants soak up pollutants.

We are all happier on a deeper level with life around us, not just our own species, but plants and animals too. Add greenery and you will get less graffiti, less aggression, bashing, illness. Add dogs to train for guide dogs to prisons and recidivism will decrease. Add pets, trees and veggie gardens to a school and absenteeism declines. Add pot plants to offices — lots — and you get fewer sick days, and not just because some plants soak up pollutants.

Forget we are animals and you build high rise concrete, cover the earth with tarmac, assume that money can replace a river system or a lost forest and a complexity of species that needed it. Even those who profit will be empty without ever knowing what they have lost. Their children's lives will wither, just a bit, filled with electronics, not with lives.

THE RIGHTS OF EVERY CHILD

- To climb a tree, every single day of their lives, even if they are wheelchair bound and need a harness to help them up.
- To plant a seed and pick a fruit, a vegetable, a herb.
- To eat what they have hunted, gathered, harvested at least once each day.
- To know where the winds come from, and what weather they will bring.
- To share their lives with one animal, at least, who has been bred to partner humans, and with others who are wild and we have learned how to share their lives with them.
- To know a wild food, and where it grows and how and when to pick it.
- To lie under the sky and see it darken. To watch the first star emerge and then track it across the sky. That will be their star forever more.
- To sit with closed eyes and see the world by smell and sound and by the change of air currents on their skin.
- To sit by a water hole. Just simply sit, so still that finally they are accepted by the animals around as an animal too, one that expects the ancient Australian right to share scarce water — don't eat your comrades at a waterhole. (Note: many snakes and most crocodiles do not obey this rule.)
- To stand, with head down, and eyes, so you no longer have the stance of a predator with eyes close together, but a herbivore, with wide apart eyes to see the danger coming. Learn to signal to the world that you are not a hunter. Unless, of course, you are, not for blood lust but to cherish the world by harvesting ferals before they can create a desert out of others' homes.
- To know how a wombat's tracks change when it is walking, running, scratching, thinking, mating or just smelling the moonrise across the hill.
- To see how ants cover their holes before a rain storm and realise that humans are usually better weather forecasters than insects, and wattle and indigofera are better than all of us.
- To walk the bush and know with every footstep there is food and how to find it, and know there is less danger among the trees than in a city.
- To love the land, as well as know it.

For if they love it, they may fight for its survival, against those sad people who were never shown what it is to truly be an animal; neither savage nor porn hero, but one who exists in the complexity of earthly wonder that is us all.



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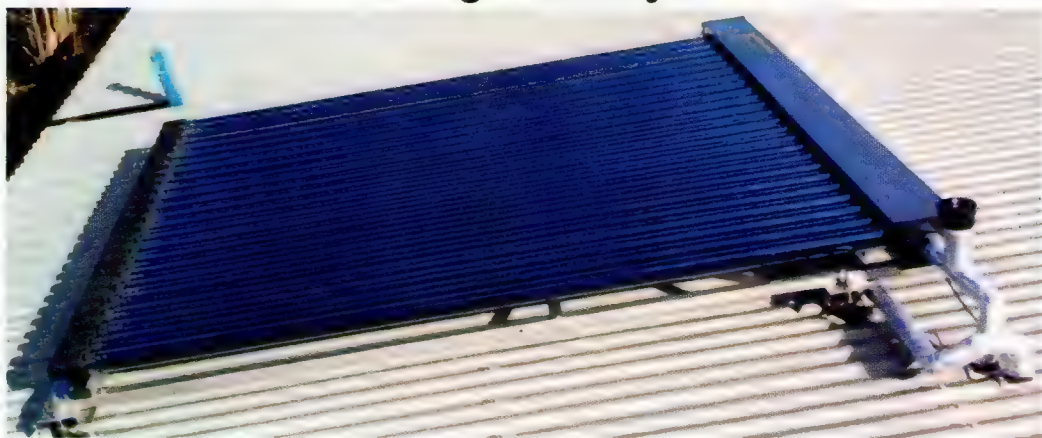


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Liz Ingham, of Clydesdale, Victoria, conducts some wicking bed science experiments that even Lord Monckton might like.

WICKING garden beds are an intriguing and simple concept in which a garden bed is suspended above a reservoir of water.

Water is drawn up to the plants by capillary action, via a fabric wick and/or a gravel mix. You fill the reservoir through a slotted pipe until water comes out an overflow hole.

It isn't an entirely new idea, but wicking beds have suddenly become quite the thing. There are designs on

the internet and examples in community gardens. Enterprising businesspeople have started selling readymade units.

It would appear to be the answer for people like us with a food garden we only visit on weekends.

And yet I resisted. Partly because most of the large-scale designs involve black plastic liners and out here termites eat tiny little holes in any black plastic liner that survives the garden forks of enthusiastic visitors.

But mostly because all that stagnant water beneath the soil just seemed so unhealthy. Swamp soup.

I thought I was alone, until Rob Furneaux of Burrawang, NSW, wrote to *Earth Garden* (EG168) warning of salts leaching out of the soil and fertilisers getting into the water reservoir and building up over time. Alan Gray responded that wicking beds are always gorgeous during the honeymoon period.

I hadn't thought of salt! Salty



swamp soup.

Actually I was also a bit annoyed to read Rob Furneaux's letter, because he posited an ingenious solution to the problem, being a drainage plug at the base of the water reservoir. Whereas I had been secretly planning to unveil to EG readers my own ingenious solution, which is a drainage plug at the base of the reservoir.

The design Trevor and I came up with is really very simple. So simple, in fact, that the visual instructions should do the job and I can spend the rest of this article talking about confirmation bias.

That wasn't my plan. Oh no. My plan, which took nine whole months to execute mind you, was to create three trial wicking beds out of bathtubs from the tip, grow things in them, deliberately leave the water un-drained over winter and borrow some kind of scientific instrument to prove how gross it is.

Confirmation bias is, basically,

DIY WICKING TIPS

- Fibreglass baths are light and don't rust.
- Make the top edges of the bath level.
- Drain matting fabric is the stuff they sell to wrap around drainage pipes. It acts as a wick and keeps the soil out of the reservoir. Tuck a fold down the side below the stones then bring the edge right up above the soil line.
- Don't put a sink strainer in the plug hole in case it clogs up. If stones fall into the pipe you can always poke them out.
- Water your plants until the overflow pipe fills up.



An upside-down view of the wicking bed: the overflow pipe has a screw cap in the elbow joint. Cut the top of the snorkel to the height you want the water reservoir to be.



Preparing the water inlet pipe. The more slotted pipe curled around the base, the more water storage. Otherwise, you only have the water stored in the gaps between the gravel or stones.



Confirmation bias is, basically, where someone gets an idea in their head and they notice the things that confirm it and ignore the things that don't.



Also, Liz's plan involved: "having a photo taken when I wasn't covered in dirt for once, perhaps with some tasteful makeup, looking intelligent. So, nailed that one, obviously".



There's your number one science, right there.

where someone gets an idea in their head and they notice the things that confirm it and ignore the things that don't. For example, I doubted all the successful wicking beds I saw, but latched on to one letter to the editor. Your homework for summer is to catch yourself doing it.

And thus I found myself today with a cheap pH / moisture / light meter I bought off the internet. I couldn't afford a salt tester. I was pretty smug to note that the water is acidic, at about six on the pH scale. Then I moved into the sun and the needle moved towards neutral for some reason. I decided to

take the photo in the shade.

Then on a whim I flicked the switch to read moisture levels, which is intended for soil moisture. On a scale of one to ten, in which one is dry soil and ten is wet, the glass of water registered an eight.

As a scientific instrument, on a scale of applied physics to utter woo-woo, this one measures about a four.

The water was brown, though, from suspended solids. I was hoping for green. Ah, of course, alien toxic slime moulds in salty swamp soup are brown; they can't photosynthesise.

In terms of confirmation bias, on a

scale of the CSIRO to parapsychology, this experiment came in at approximately Lord Monckton.

Really, I have no idea if this design solves a known problem, except that it will help flush out any bits of soil and yerk that will otherwise clog up the reservoir. Or salt. It was easy to construct and grew some really very tender beans and beets last summer, which are two veg that I struggle to grow properly because of the hot weeks when we only water on weekends.

I'm going to try again this summer and drain the water every couple of months, as Rob Furneaux suggested.



Chris McLeod, from Cherokee, Victoria, calculates how much water he needs for bubble baths (and farming).

LIVING on a farm gives me the chance to do lots of rugged, dirty and strenuous activities. If I need a house built, done that – tick; landscaping, no worries, I’m on to it; an attractive shed built in the courtyard – easy – tick; or a fox-proof chicken house and enclosure built, done – check.

However, at the end of the working

day, I like nothing better than sitting in the bath, looking out the window and off into the distance. If that bath has bubbles in it then that’s even better.

Like any number of properties across this vast continent, mine is not connected to a town water supply. So if I want bubbles at the end of a working day I have to ensure that the water stored on the farm is accessible for use

in the house.

I also have to ensure that I don’t run out of water. It’s a balancing act between how much of that wet stuff falls from the sky and how quickly I use the water in the tanks. Drought years can be unpleasant because that may mean occasionally going without bubbles and that can certainly lead to unhappiness.



Author with his newly installed water tank farm. No water shortage here.

When the rain does fall onto any roof at the farm here, it is collected in steel gutters and then piped to the water tanks for storage. To calculate how many litres of rainfall you'll collect multiply the millimetres of rain received by the square metres of the roof collection area. So: litres collected = rainfall x roof area.

You can use this formula to calculate how many litres you'll collect in a year by including the annual rainfall. For example, say your area receives on average about 600 mm of rainfall a year and your roof collection area is 300 square metres, then you can expect to catch 180,000 litres of water in an average year.

That's a lot of bubble baths!

The thing is though, long hot summers mean that you end up using

more water in summer than you ever do in winter. The vegetables and herbs are always more thirsty during summer. Occasionally, before a heat wave, the extensive orchard will get a bit of a drink too. The chickens are always thirsty, and then there are the bubble baths with the door open letting in the warm summer evening air, listening to the birds in the trees and watching the sun go down (can you tell I'm writing this article in winter?).

So, with water storage you have to have enough water stored to get through the worst conditions, not the best, nor even the average. One summer it didn't rain here for almost five months and every day the water levels fell in the tanks.

Guessing how much water you need to have stored on a farm is more art

You have to have
enough water
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not the best.
nor even
the average.

than science, simply because you just do not know when it will rain next. On the farm here I have a bit over 100,000 litres of water storage in the tanks.

That sounds like a lot of water, but in the five months (150 days) when it didn't rain here, if I'd used 500 litres a day, I'd have used a total of 75,000 litres, which is three quarters of the total water stored here. Towards the end of that summer, bubbles became a very low priority!

Whether you're in an urban centre or out in the middle of nowhere, water and water storage systems are probably on the mind of most Earth Gardeners. Whether you're growing a few vegetables in the backyard, or a couple of acres of crops, or simply want a bubble bath, then sooner or later you'll need water.



TREE FARMING ON SOLID ROCK

Alanna Moore, of Castlemaine, Victoria, tells how she made a productive permaculture farm on dry rocky country.

IN 2000 I found my 14-acre central Victorian farm with its beautiful hilltop rock outcrop and I was smitten! It was two years into a 12-year drought. But I knew I could design around it. This was to be my dream permaculture farm.

This Goldfields area is known for its hard rocky ground, hot dry summers and cold winters. Often there is no topsoil at all. However, the back paddock has red soil from a lava flow from Mount Franklin. It has a fine pond too. But after 2000 it often dried up. I had another dam made and installed water tanks. But they all got low at times. You can design for water collection, but you can't make it rain.

I couldn't wait to start growing food close to the house that I built. But the many thirsty eucalyptus trees soon learned where I was watering the rock gardens. Their roots plundered all the moisture and nutrients and so I had to give up on that. Better luck was with the orchard in the valley, where all the topsoil had washed down to and there were no gums.

OUTWITTING THE COMPETITION

Someone told me about wicking beds as a way of conserving water: you create a water reservoir beneath plants using a plastic liner or equivalent. Tree roots are excluded as well. You can thus grow plants anywhere! I transformed my hot house into a sub-



The olives benefit from the water trapped by the handmade swales.

tropical garden of several wicking beds and the vegies grew profusely.

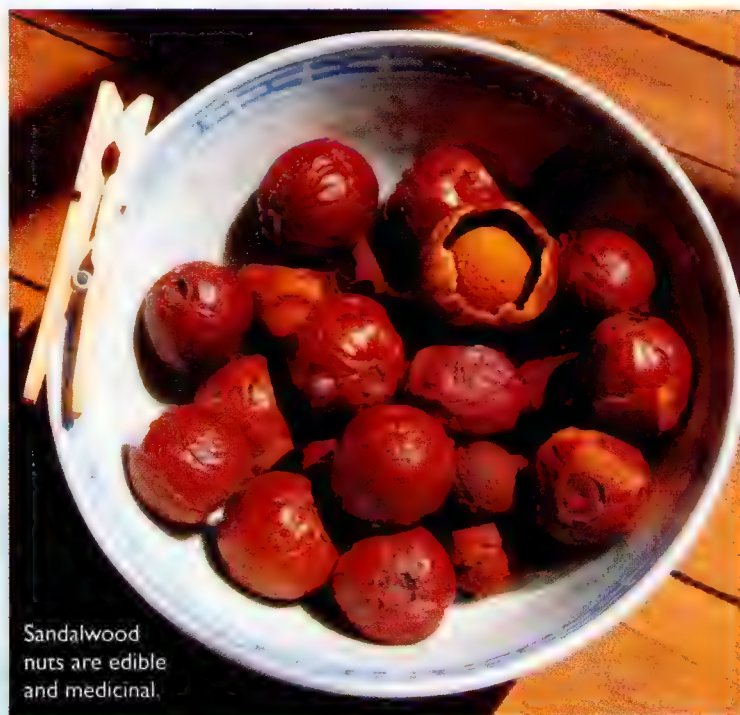
What to do with the other acres? I hired a Yeoman's Plough/Soil Aerator that ripped up the hard-packed soil, following the contours. I planted wind-breaking wildlife corridors with hundreds of trees, each one protected from hungry rabbits by a tree guard. I noted which plants rabbits preferred not to eat, which included many natives and most things aromatic.

I planted edible European plants here and there, but those far from a tap mostly died. Natives have been the top survivors, and are a welcome habitat for wildlife. I eventually evolved my own, mostly indigenous,



Wattles and sandalwood nuts.

Sandalwoods can handle sizzling heatwaves and cold down to minus 7°C, plus they love it dry.



Sandalwood nuts are edible and medicinal.

permaculture. So what worked the best?

Olives proved great survivors; however, rabbits and wallabies were also partial to eating them, so protection was important. Carob trees are another great stalwart and I found their sluggish growth was accelerated with lashings of diluted urine as fertiliser (watered down 10 parts to 1). Ginkgo biloba trees are tough in the back paddock, but have to be protected from nibbling llamas. (My llamas keep down the grass, conveniently dung in one spot and provide lovely wool.)

INDIGENOUS PERMACULTURE

Of the natives, I've had great success with local acacias — Golden Wattle and Wirilda (*A pycnantha* and *A retinodes*). After two years they produce an abundance of edible seed. When roasted

and ground, the protein-rich seed can be added to flour for baking, or drunk as a delicious coffee substitute.

The standout crop is from Western Australia. *Santalum spicatum*, the source of sandalwood oil, is not harvested very sustainably in the wild. Sandalwoods can handle sizzling heatwaves and cold down to minus 7°C, plus they love it dry.

I had hundreds of baby sandalwood trees trucked over in 2006, each with a host acacia in the pot — as semi-parasites they need to attach their roots to those of another. They also need another host around a metre away, as the one closest will need culling or may out compete them. So I planted them amidst existing wattles and trees, and kept on

planting more around the wattles that are short lived.

Seven years passed. Now each April I enjoy the divine perfume of sandalwood flowers and by December trees are festooned with large edible (and medicinal) nuts, which some think more valuable than the oil crop. Sandalwoods are unattractive to rabbits and other nibblers. I can direct seed them around my pesky gums too! What a winner!

It just proves the permaculture maxim, that for every problem there will be many solutions, if you think outside the box.

Note — I've now decided to move on and am offering Muckleston Permaculture Farm for sale. Enquiries can be emailed to: info@geomantica.com.



DOWNPIPE WATER HARVEST

Nevin Sweeney, of St Clair, New South Wales, invents a nifty device for diverting stormwater to the garden.

I DECIDED to divert some rainwater from the closest downpipe directly into my water garden. I realised I would have to redirect the water flow in heavy rainfall times back into the stormwater system so that I didn't flood the back yard. You can use this device to divert rainwater to a tank, garden bed, tree or water garden.

All of the storm water downpipes at the choko farmhouse are rectangular, around the 100 mm x 65 mm mark, and this got me thinking. The lump of 65-mm downpipe I cut off the carport when I was installing the wheelie bin water cistern (see *Earth Garden* 166) could all of a sudden become handy. My plan was to drill an appropriately sized hole on either side of the downpipe and insert the piece of 65-mm downpipe horizontally, cutting out a section of the centre and adding a cap to either end. A fitting through one end cap would allow water to be drawn off when the cut out was facing up. To return the rainwater to the stormwater system I could just turn the tube through 90° to allow the water to flow

through the cut out.

I grabbed the piece of pipe left over from the wheelie bin and after carefully measuring the width of the downpipe and the depth of the caps I cut off a piece of the pipe at 135 mm long. Then I fitted the end caps to the pipe (push on only, not secured) and tried it up against the downpipe. Lo and behold, it seemed to fit okay. I glued one end cap and drilled and screwed it in for extra security. (There would be a fair bit of pressure from the water in the downpipe and I didn't want an end being blown off.) The other end I only drilled and screwed in place so I could fit and remove the pipe when I wanted to.

With the end caps in place I drew a pencil line on the pipe beside each cap and then along the pipe about half way around to mark the area of pipe to cut out. To make the cuts across the pipe it was easiest to use my little band saw, but a hand saw would have worked just as well, albeit a bit more slowly. The cuts along the pipe were a bit more difficult to work out. In the end I used my 12-volt Dremel-style tool with a very small

cut-off wheel.

To channel the water from the cylinder I used a ¾-inch BSP to 13-mm barb poly fitting. Using a 25-mm spade bit I drilled a hole at the bottom of the end cap that would face the direction I wanted the water to run in. I screwed it in tightly and, to ensure a seal, slathered the joint in silicon sealant.

The easiest way to make the holes in the downpipe was to use a 70-mm hole saw and a drill. I marked the centre with a pencil mark and with a small drill (2–3 mm) drilled a pilot hole to prevent the main drill going off centre. It was then a simple matter to drill out the 70-mm holes in the downpipe.

With holes in place I fitted the cylinder by removing one end cap, sliding the cylinder in and then refitting and screwing the other end cap to secure it. It seemed to seal OK and while not being sloppy it was still reasonably easy to turn. When the 13-mm barb fitting is at the bottom of the end cap all of the water is diverted down the hose; when it is rotated through 90° the water bypasses the cylinder.

You can use this device to divert rainwater to a tank, garden bed, tree or water garden.



Cap in place, starting the cut to remove part of the pipe.



The cut completed and the other cap in place.



The hose fitting goes next to the remaining pipe wall.



The 70-mm hole drilled in the downpipe.



The device in place.



Ready to supply water.



Water starts to come down the main channel.

NO TANKS FOR THE DOWNPOUR

No water tank? No worries. **David Hutchinson**, of Moonee Ponds in Victoria, describes his clever system to use rainwater for his precious garden beds.

IT ALL STARTED off as I sat on the front veranda drinking, and watching the rain come down. A downpour was something to watch during the drought in 2010. The downpipe was spluttering into the stormwater drainage system leading out into the street. This had to stop.

The front yard is pretty small so we were not keen on a water tank to capture the runoff. Besides, only a small portion of the roof drains to the front. Still, water was going to waste, so what to do?

A couple more rain events and the plan started to form: channel the water onto a series of terraced garden beds and

set up the terraces for furrow irrigation from the tap.

The scene was set when Judith had a knee replacement. The front garden is right outside the bedroom window, so I could be on call and work at the same time. No more procrastination.

SOME DESIGN ADVICE

Make the main channel leading from the downpipe to the start of the terraces from some form of masonry. Do the same for the main path through the terraces (which doubles as the main water channel) and the flow control gates.

The gates are vertical slots in the channel wall with a solid slide to block the flow.

You need a high flow rate entering the terrace being watered so that the water moves quickly down furrows. Design for 4 litres a minute per square metre to 1.5 litres a minute per square metre for sandy loam and clay loam respectively. Your tap is likely to put out about 20 litres a minute; check it.

If you can fit a water tank under the downpipe all the better. Don't skimp on outlet size. Think 50 mm! Lay some 20-mm-plus HDPE (High Density Polyethylene) pipe from your best garden



tap to the tank or main channel. Size the tank to deliver 20 mm over the entire area.

You don't need much fall. Over a distance of about three metres my main channel falls 70 mm. Photo one shows water starting to come down the main channel, or path. Photo two shows a slide gate closed and water starting to flow into the furrows. If you take the bottom of the channel as your zero depth, overflow through fixed (50-mm wide) openings into the furrows either side happens at 40 mm depth and bed height is 100 mm but can be higher.

The bottoms of the furrows are finished off using a hoe (photo three.) Water then spreads out between garden beds.

So off I set laying the main channel to the high point. This channel, one brick wide, one brick on its side deep, runs along the fence line and grades back up to the downpipe. I have the option to divert it back to the street drain but I've never needed to.

The walls of the terrace beds I made of brick or cobblestones reclaimed from existing garden beds. If you have plenty of land, then consider doing your own designs for terrace walls using soil formed into mounded garden beds or just maintainable earth mounds.

Plants immediately outside and below the irrigated terrace area seem to thrive from sideways water movement in the soil.

Finally, to minimise water use from the tap you need to do these things:

1. Make sure of large flows so that furrows fill quickly.
2. Check soil moisture as deeply as possible using a meter. This type of irrigation results in deep watering, so don't overdo it. I water the main terrace in 15 to 20 minutes.
3. Use a tap timer or you can forget it's on and cause a flood.
4. Once plants are mature enough, mulch the whole area including furrows. Water still gets through but check occasionally with your hoe.



WATER WORKS FOR A THIRSTY FARM

Running low on water prompted **Bruce Hedge** to check the water supply at his Newham, Victoria, farm.

I GOT a fright the other day. We ran out of water and I didn't know why. Being on tank water exclusively makes you very aware of how much water you use. In the middle of spring, running low on water is the last thing you need. I climbed up and looked inside our main 31,000-litre tank, and was alarmed to see it empty! It must have sprung a leak! Don't panic, keep calm and carry on, Bruce.

Occam's razor soon kicked in (simplest explanation is usually correct) and I realised that we'd simply been using far more water than before. The family had been staying with us for a couple of months during renovations on their house, and three young grandchildren use a LOT of water. Baths, laundry, extra showers, and a WWOOFer or two all add up. One of the contributing factors was that our normally reliable August rainfall disappeared! I recorded the driest August ever, in 35 years of recording, at 18 mm. Our tanks usually fill over winter and spring, so I was caught off guard. Fortunately, the water system we'd designed at the start of our permaculture adventure came to the rescue, and we now have water again.

Our initial design had a simple 22,000-litre concrete tank catching the water from half the house. This high quality water was used only for drinking so we had more than enough. It was also our fire pump supply. We used dam water for everything else until the quality got bad one dry year, and we installed a large 31,000-litre tank to catch the water from the other half of the roof. I left the dam water plumbing in place and we can switch if we need to. The loo remained on dam water, and will never be flushed by good water.

The larger new tank sits three metres below the concrete tank, so a hose from the older concrete tank can fill it by gravity. We pump water from the newer tank into a 4,500-litre header tank, which gives low-pressure gravity flow. It takes ten minutes for a salvaged swimming pool pump to fill the header tank, which is about four metres higher than the shower head. At four litres a minute from a big old shower rose, a three-minute shower doesn't use too much, and there's no humming on-demand pump. The lower pressure fills the washing machine slowly, but we're not too fussed about that. We've had a



Being on tank water exclusively makes you very aware of how much water you use.

slightly wetter September (phew), and with our self-imposed water restrictions, we should be okay. I don't relish the thought of paying \$220 for 14,000 litres of water to be delivered, but if we have to, so be it.

Looking back, I'm sure we'd tweak our system in small places but here, from experience, are a few thoughts about water design for those of you starting out.



Bruce's tank system design features.

BRUCE'S TOP TANK TIPS

1. Install at least two, if not three tanks. Cover all inlets and outlets with bird wire netting. We had a rosella get inside one of our tanks and drown. The smell was awful. I'm sure a rat or possum would have been worse!
2. Put first-flush water diverters on all inlets. The simpler the better. Emptying them regularly shows you how much muck and gunge has NOT gone into

your tank.

3. Use lower quality dam water for the loo. If your dam's above the house, perfect!
4. Make the cold water system switchable so you can have a shandy shower and wash dark clothing with dam water in the dry times.
5. Catch rainwater in a drinking water tank just under the eaves that overflows into a main tank. Gravity feed this water

into a separate tap in the kitchen sink. No pumps needed for a drink of water.

6. Our fire and garden water comes from the dam, pumped into a 9000-litre header tank by a petrol pump, reticulated through the property by 50-mm pipes.
7. Remember 10 mm of rain over 100 square metres of roof yields 1000 litres of water. Do your own sums.

I'm off to make some mulch.

raking it in

We need to keep our house and yards fire-safe and free of dry leaves, and our vegie gardens and fruit trees well mulched, says **Jill Redwood**, of Goongerah, Victoria.

LEAVES are chock full of nutrients brought up from deep underground. It's a shame to just burn or bin them, so why not turn a liability into a bonanza of rich humus?

It goes without saying then that, with trees around the house and sheds,

raking is a constant task in summer. But think of the other positive: it's great upper body exercise.

When I bought a denuded river flat 30 years ago I madly planted trees, both European and native. The place is now like an open forest and gives fantastic

summer shade. The trees help drain the wet spots, create micro-climates in winter and support wildlife that hasn't lived here since it was cleared by the early settlers.

The deciduous leaves that didn't quite decompose over winter can be



Leaf litter is an essential part of a healthy humus layer, in the forest and around our garden and orchard.



To move leaves in large volumes, a high-rise wire cage can be fashioned from chook wire to fit inside your wheelbarrow or tow-along trolley.

Left: Jill raking leaves and stacking in high-rise barrow attachment for carrying bulky lightweight leaves.

All photos these pages courtesy of Jill Redwood.

raked and used to mulch the vegie beds. Being full of nutrients that the trees kindly brought to the surface and free of weed seeds, these leaves are immensely valuable. I even use a large old water tank on its side near the garden to store leaves in readiness for summer use.

Pile leaves on beds to keep an even

soil temperature, the moisture locked in and to encourage the hustling, busy sub-soil microbial and micro-buggial activity that plants need and love.

For the tougher, growth-suppressing eucalypt rakings, chuck the leaves and twigs into a chipper to make weed-smothering mulch for garden paths.



Hundreds of species of fungi love devouring dead wood and leaves.

So much of a forest's workings take place in the humus layer. It's the bottom of the food chain where lizards, frogs, birds and small marsupials dine on insects, including those that have evolved to eat dry eucalypt leaves.



The leaf litter layer is the source of food for many creatures, such as this lyrebird.

Once chomped down more finely it won't burn so easily. At a fire-safe distance you can also dump them in a pile or build a corrugated iron bin to corral them for a couple of years while they compost down to rich useable compost. A bit of nitrogen occasionally will help them along. But my favourite use is to spread huge loads of leaves under fruit trees right out past their drip line. They love it! It suppresses grass competition and encourages that soil-humus activity that happens naturally in a forest. If your trees suffer from fungal diseases like scab, leaves underneath stop the rain splash from sending the bad fungal spores up onto the tree again in spring. And as the good fungi start to procreate under the leaves they suppress the nasty fungi.

To move leaves in large volumes, a high-rise wire cage can be fashioned from chook wire to fit inside your

wheelbarrow or tow-along trolley. It increases the carrying capacity fourfold. Otherwise, stuffing them in a chaff bag or old wool bale is another way to shift them easily.

Now while we're talking leaves, I must have a little rant on a closely related topic — that of planned government burns to rid vast areas of our forests of dreadful things. The blitz burn advocates cunningly give this essential layer the label of 'fuel load' to generate a public fear of leaves.

In an unmolested forest, the cover of ferns, native grasses and shrubs shelter and hide the bandicoots and potoroos, lyrebirds and bush rats. They constantly turn over and dig through leaves, bark and twigs, tonnes per animal per year, just like we do with our compost heaps. The understorey plants keep a damp, cool microclimate where the fungi and

microbes efficiently turn it into rich soil. So much of a forest's workings take place in this humus layer. It's the bottom of the food chain where lizards, frogs, birds and small marsupials dine on insects, including those that have evolved to eat dry eucalypt leaves. And what about the amazing array of fungi? The delicate fruiting tops we see are a tiny component of the vast, voracious wood-eating hidden parts that efficiently digest dead plant matter, including large fallen or standing dead wood.

But incinerate all this over large areas too frequently and it destroys the very things that eat, digest, turn over and convert plant material into healthy friable natural compost. Deliberate burns effectively stop the breakdown of leaf litter and create an endless cycle of needing to burn. Our forests are simply giant gardens. And who'd burn their garden beds regularly?

WOOD OVEN CRACK UP

Wood oven maestro **Alan Watt**, of Tanja, NSW, sheds a crack of light on a big problem.

Hi Alan,

I'm not sure if you remember me but I did a wood-fired oven workshop with you a while ago, I think at the end of 2009. I ended up building my own, and was meant to send you a photo of it but kept forgetting, so I have attached one now for you. It works really well; I have made many a pizza and some bread in it.

I'm emailing you as I have a question about my oven. Over time a big crack has appeared at the front around where the damper is — see the photo. To me it looks like the flume gate and chimney haven't moved but the dome around it has been pushed up when the oven expands during heating. It looks like the crack goes through the cement (aesthetic) layer, the vermiculite layer and to the insulation blanket. The brick dome on the inside is fine: no cracks.

I'm thinking of fixing it by removing the outer cement layer and seeing what's underneath and going from there. My question is whether or not you think this is a good idea, or should I just leave it? The oven still works fine, it's just that in winter I need to cover it up, otherwise water gets in and seems to seep right through as I can see water on the floor of the oven (I think the arches have also moved away from each other slightly). It's no problem covering it — just doesn't look as good! And if you do think it's fixable, do you have any suggestions on the best way? Do you think it would be a long term or a short term fix? Thanks for your help! Cheers, Jeddah

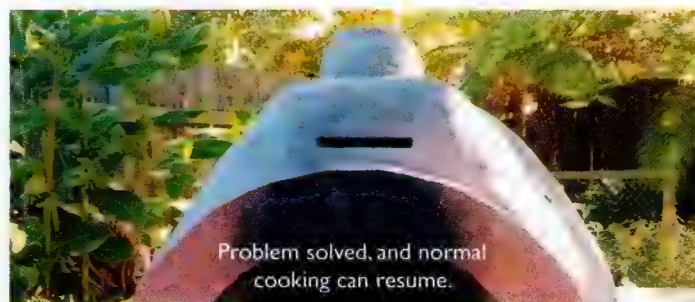
Hi Jeddah,

That's quite a crack. While there is often a small crack developing in that area, in your case something has shifted dramatically.

I think it is repairable without going to a great deal of trouble. The next time you heat up the oven and the crack is at its widest, make a fluid mix of one part ordinary cement to five parts brickies' sand and pour it into the crack. On sections where the mix may pour out (on vertical sections) cover and close the crack temporarily with some clay or putty. Do it in small doses so that the initial pour is allowed to stiffen (because of the heat).



Help! The cracks in Jeddah's oven allowed rainwater inside.



Problem solved, and normal cooking can resume.

Keep adding it little by little until the crack fills. You can make a slightly stiffer mix and trowel over the depressed section and the cracks covered by clay/putty (after you remove the clay/putty) until the outer surface is level, for aesthetic reasons.

On cooling, the oven may try and contract but the cement/sand fill should prevent it returning. You may need to do the same on subsequent firings to a lesser extent but the cracking should eventually be eliminated.

You can then give the oven an overall brush coat render with a 1:4 mix with added colourant and waterproof addition (Silasec or Bondcrete).

While making the initial pour keep moving the damper in and out in case the fluid mix is entering the damper slide.

I hope that helps. Let me know how you get on. Regards, Alan Watt

Reply from Jeddah

Hi Alan,

I've finished filling in the crack as per your advice, and it worked really well! I've attached a photo of how it looks now. I've heated it up a few times now and it doesn't seem to be cracking at all anymore, so I'm very happy. Thanks for your help! Cheers, Jeddah

• Alan conducts regular workshops across Australia and beyond. To learn more visit: woodfiredovenworkshops.com.

LEAFY GREENS

your best friends under the sun

There are heaps of great lettuce varieties around these days writes **Wendy Bartlett**, of Nairne, South Australia.

One of the easiest plants to grow in your vegetable garden is lettuce, because you'll be picking the outer leaves in only a few weeks from sowing. They aren't too fussy about where they grow and they're perfect for any sized garden — especially balcony gardens where they can be grown in pots.

PREPARING THE SOIL

Lettuce prefers a well-drained, slightly acidic to slightly alkaline, moist soil and can be grown all year round in temperate climates — but in climates with hot summers it's best to plant in a semi-shaded position or grow them in pots. They have shallow roots so

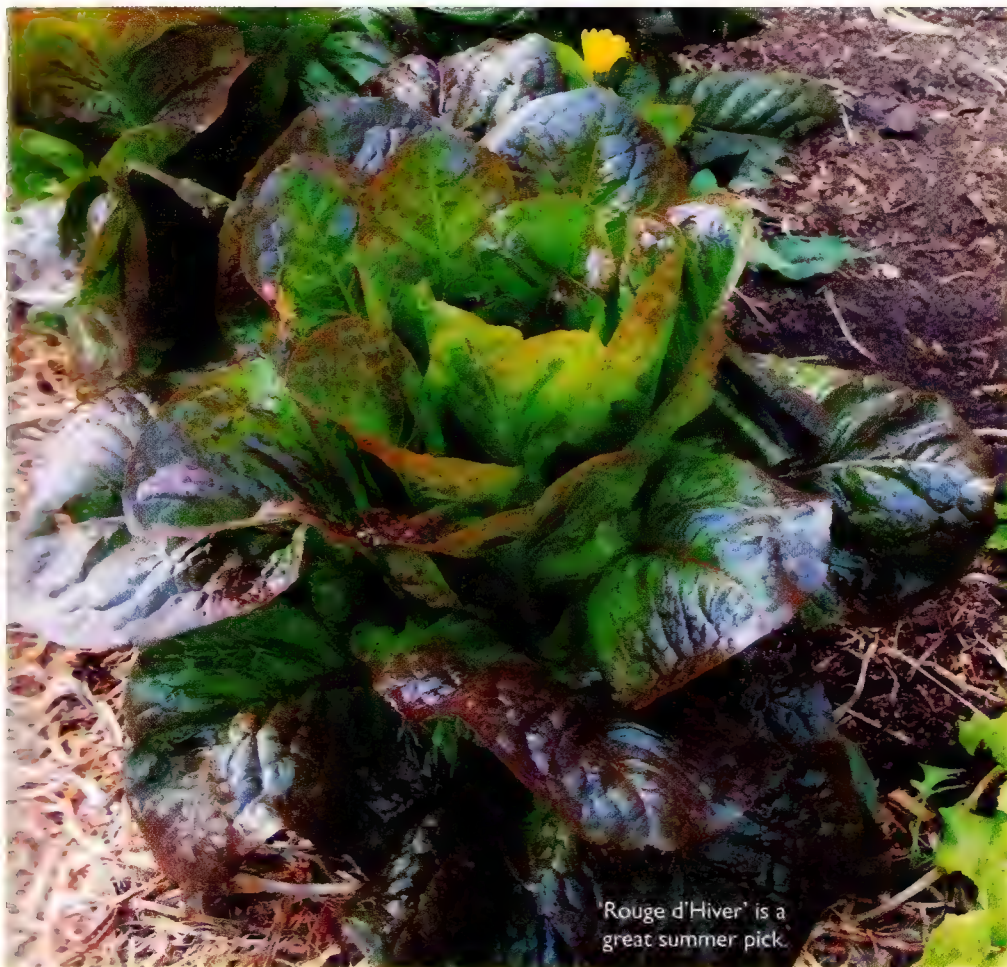
till the soil lightly and incorporate plenty of blood and bone and wood ash into the soil a month before planting because they love plenty of nitrogen and potassium.

SOWING THE SEED

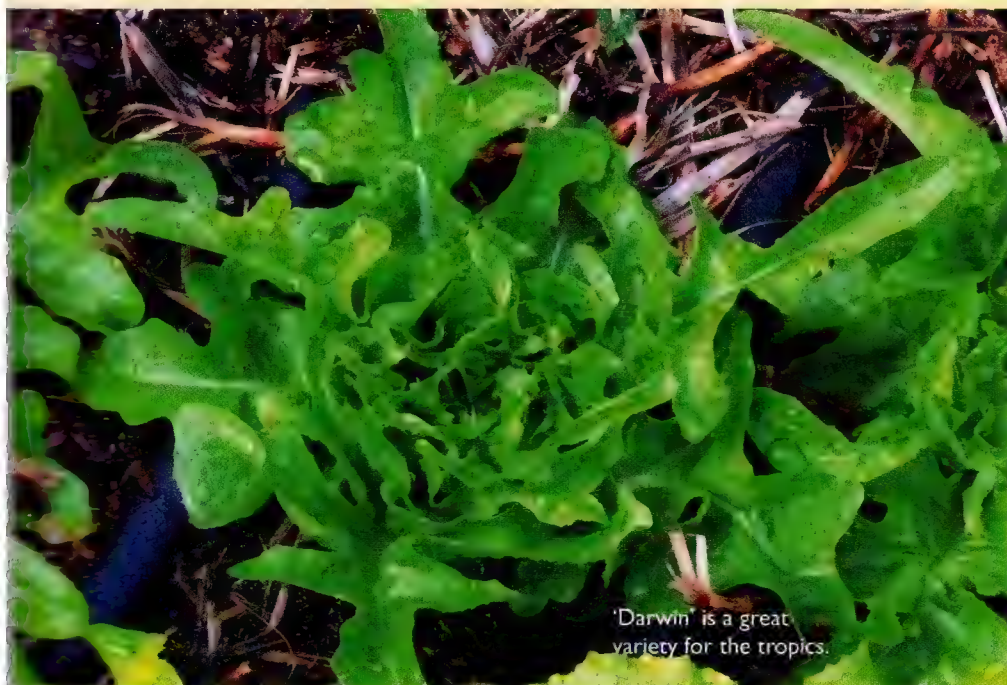
Seed can be sown direct into garden



Grow lettuce in any old thing.



'Rouge d'Hiver' is a great summer pick.



'Darwin' is a great variety for the tropics.

THE FOUR CATEGORIES OF LETTUCE

- Crisp head or cabbage lettuce as in the supermarket icon, the iceberg;
- Butter head — soft heart, soft textured leaves and juicy and sweet;
- Romaine or Cos — upright growth, cylindrical and loose leaf varieties;
- Loose leaf — arranged around central stalk and often large and curly.

MY FAVOURITE PICKS

- Crisp head: 'Great Lakes' — resists early bolting — Digger's and Eden Seeds.
- Butter head: 'Green Mignonette' — soft curly leaf, small heart, great summer variety — Eden Seeds.
- Cos: 'Rouge d'Hiver' — slow to bolt in summer, leaves deep red/brown — Diggers Seeds
- Loose leaf: 'Darwin' (great in tropics); 'Oakleaf', green; and 'Lollo Rosso', magenta, deeply curled leaves — all from Eden Seeds.

position or in trays or pots at a wide range of temperatures, but germination rates are better between 7°C and 18°C. In hot weather, transplant into a semi-shaded position on a cooler day when they are about 5 cm high.

Plant in rows 30 cm by 30 cm and once plants are established all you need to do is mulch and water well. This will ensure they never dry out and bolt to seed too early. You can expect to be harvesting leaves, depending on variety, between 35 and 70 days after sowing.

PESTS AND DISEASES

Aphids and leaf hoppers can cause a lot of damage, but spraying plants with a



Wendy inter-plants lettuces with spring onions.

homemade garlic spray or pyrethrum will keep them under control. Slugs and snails can reduce plants to shredded piles of mush overnight so place snail traps out at night, like an old plastic tomato sauce container with some beer inside. They won't be able to resist the smell of a good brew and will bypass your plants and head straight for the garden pub.

And watch seedlings for damping off, a fungal disease that rots stems of young seedlings.

POP ONE OR A FEW IN A POT

Pop a pot in a sunny spot near the back door and you have access to fresh lettuce all year round, and you don't even have to put shoes on to pick a

few leaves for the salad bowl. Mixing several varieties of different colours and textures makes not only an attractive addition to your pot collection, but a practical one as well. Why not poke some spring onions in between your lettuce to make good use of every little space, or some beetroot, radishes or a strawberry plant or two — they make great companions.

MY FAVOURITE SUMMER PICK

I like 'Rouge d'Hiver', a reddish-tinged Cos type lettuce which tolerates extremes of temperatures without bolting. It's an excellent loose leaf variety for my area which experiences light to heavy frosts in winter and 40°C

temperatures in summer. I plant it as a staple while I'm trying to get the smaller, sometimes more fragile varieties off to a flying start.

SAVING SEED

If you're new to seed saving, lettuce is one of the easiest ones to start out with. Always collect seed in dry conditions and from the strongest, healthiest plants and place it in a labelled envelope and store in a cool, dry place. Seeds will last for up to five years.

If you've never been a lettuce eater, you will be when you taste some of the mentioned varieties. There are so many fun and tasty varieties to grow now, there's no excuse not to eat your greens.



*Gardens are not made
by singing 'Oh, how beautiful,'
and sitting in the shade.*

RUDYARD KIPLING

brown egg beauties

THE BARNIE

When it comes to good looks the Barnevelder is no slouch, writes **Claire Bickle**, of Brisbane, Queensland.

I HAVE read that many moons ago when the English came across the Dutch breed of chicken, the Barnevelder, they got to thinking that their amazing brown eggs were healthier than white eggs. This is, of course, completely not true. Maybe it's the white bread versus brown bread thing. Who knows?

I have to admit when I first ventured into keeping chooks the thing that I really wanted was a lovely array of egg colours when doing my daily egg collection. So off to research I went: Ancona for pure white, Australorp for cream, Araucana for blue and French Maran, Welsummers and Barnevelders for the deepest of browns. When you're an Urban Chook Wrangler there's nothing better than having a variety of purebred chooks parading around the back yard for visual pleasure.

There are other reasons for keeping a variety of purebred chicken breeds besides beautiful, different-coloured plumage to look at: varying

temperament, egg laying capacity, and egg shell colour, plus you're supporting breeders of purebred poultry that might be endangered. Just because your council regulations don't allow you to keep roosters and breed your favourite chook it doesn't stop you from supporting those who can and do by buying your chooks from them.

So, breeds decided upon, off we set to the local hatchery with list in hand: two Barnevelders, one Ancona, two Araucanas, two Rhode Island Reds, two Australorps, one Welsummer and a Gold-laced Wyandotte! Oh, and we came home with two turkeys thanks to my husband. And yes, that is indeed another story or two.

So let's showcase this gorgeous breed of chook, the Barnevelder . . .

BARNEVELDER BASICS

This is a hardy breed originating in Holland, named after a town called Barneveld. Most Barnevelders lay a dark brown egg, but just be aware that not all

This Barnevelder hen shows off her iridescent green neck plumage.





Barnevelder roosters are handsome devils.

IN THE SUMMER TIME

It's summer and no matter where you are in the country I'm sure you and your feathered friends are going to, at some stage over the next three months, endure some unpleasantly hot weather.

Chooks do not fare as well during hot spells as they do during cold ones. So what can you do to ensure the comfort and even the survival of your chooks when the heat really hits?

SUMMER CHOOK TIPS

- Cool clean drinking water, kept out of the sun.
- Add ice if needed in the form of a big block of ice created in an empty milk bottle. Cut off the bottle and put the ice in a tub of water. Make sure no one can drown in the tub by placing a brick or two in it.
- Cool treats such as watermelon from the fridge.
- Chooks eat less when it's hot, so make sure the food they're eating is dense in nutrients and vitamins, such as a high protein percentage layer mash.
- Be sure chooks have access to shade. I let mine out to free range around the yard and find the coolest locations.
- Hose down pens or spray or mist if needed.
- Ensure housing has good ventilation and is out of the sun.
- If birds go into distress an electrolyte drink may be of help:
3 tbsp honey, ¼ tsp salt, ¼ tsp baking soda and 1 cup of cool water.

Happy chooking!

When you're an Urban
Chook Wrangler there's
nothing better than
having a variety of
purebred chooks parading
around the back yard for
visual pleasure.



Barnevelders can lay up to 200 eggs a year, though it's not necessarily true that their eggs are better than white-shelled ones.



Beau has a hold. Barnevelders make great back yard companions and pets.

bloodlines do so — you may wish to ask the breeder if theirs do.

You will often read that the Barnevelder is a dual-purpose breed, meaning that they are good for meat and egg production, often laying up to 200 eggs a year.

The plumage is a lovely dark brown with striking double black lacing. They do come in other colours but these are not as

commonly seen in Australia or as popular, although the blue laced variety is popping up here and there.

They have a lovely temperament and make great pets and are generally happy to be handled by children and adults alike. I can highly recommend this breed for the urban backyard and hope that you find as much pleasure in keeping them as I have over the years.

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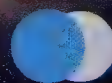
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other colours available



plum with
grey trim



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grey trim



black with
grey trim





Sundial at the
centre of the
herb garden.

Crithmum maritimum
Samolus

Tanya Jenkyn, of Esperance, Western Australia, considers how to find a balance between useful plants and merely enchanting ones.

THE PROPERTY we live on at the moment has plenty of space but very limited access to good water. Though there's no shortage of the salty stuff, being at the edge of a salt lake. So we have, by necessity, become mercenary about which plants warrant the treasured fresh water, and those which are deemed frivolous and allowed no real estate.

Our boys have been raised amongst the vegetables in our patch and, although they delight in picking fresh

peas from the vine and the sweet squish of cherry tomatoes between their teeth in the summertime, my eldest has started taking note of other people's gardens. He's become curious about . . . well . . . fripperies! Flagrantly frivolous fanciful flowers, good for little more than adding colour and sucking back water and nutrients.

"What's this flower mum?" he'll ask. "Pffft! A petunia," I'll sneer, lifting my nose in the air and striding off. "Can we plant some?" he begs. "Bah, of

course not, it's useless," is my standard response. I'd try to distract him by introducing him to the wide open face of sunny calendula, or the sweet little Johnny jump ups, yet still his head would turn for any lillium, ranunculus, tulip or gladioli that he happened by.

However, as any parent will tell you, children will make you humble, and when I considered it more deeply I realised that his instincts actually have some grounding in truth. Many of the flowers I'd been discriminating



Eyecatching marigold.

against do and can play a role in more than just decoration. Most importantly, bees adore a varied diet and delight in flowers of all shapes and sizes. Often they'll also attract other beneficial insect helpers too. Flowers can also act to distract non-beneficial beasts from your edible crops. So in the interest of family harmony I'm starting to soften.

LINGERING IN THE BOTANICAL GARDENS

I fell in love with herbs at the

Melbourne botanical herb garden. We lived in an apartment and grew what we could on a balcony but the botanical gardens were within walking distance and became a place of solace for me. From our house, when you left the city streets and entered the gardens, you first walked past some majestic cinnamon trees, remnants from the original 1890s Medicinal Garden. And also past that female ginkgo, famed for her pungent fruits when in season. But just around the corner from her was a secret garden,

or so it felt to me. You enter through overarching boughs of bay laurel that were carpeted beneath with *Achillea millefolium* and come out into the dappled shade of a circular traditional medicine garden complete with a spherical brass sundial at the centre. It wasn't especially lovingly tended all year round but had obviously been planted with care. In the summertime you could run your fingers through lawn chamomile releasing the bubble-gum fragrance, but then a few months

Herbs have always played a major role in my planting and now they become the bridge between our drive for a garden full of useful plants and my son's desire for the whimsy of flowers.



Very pink salvia.



Tanya and boys take a closer look.



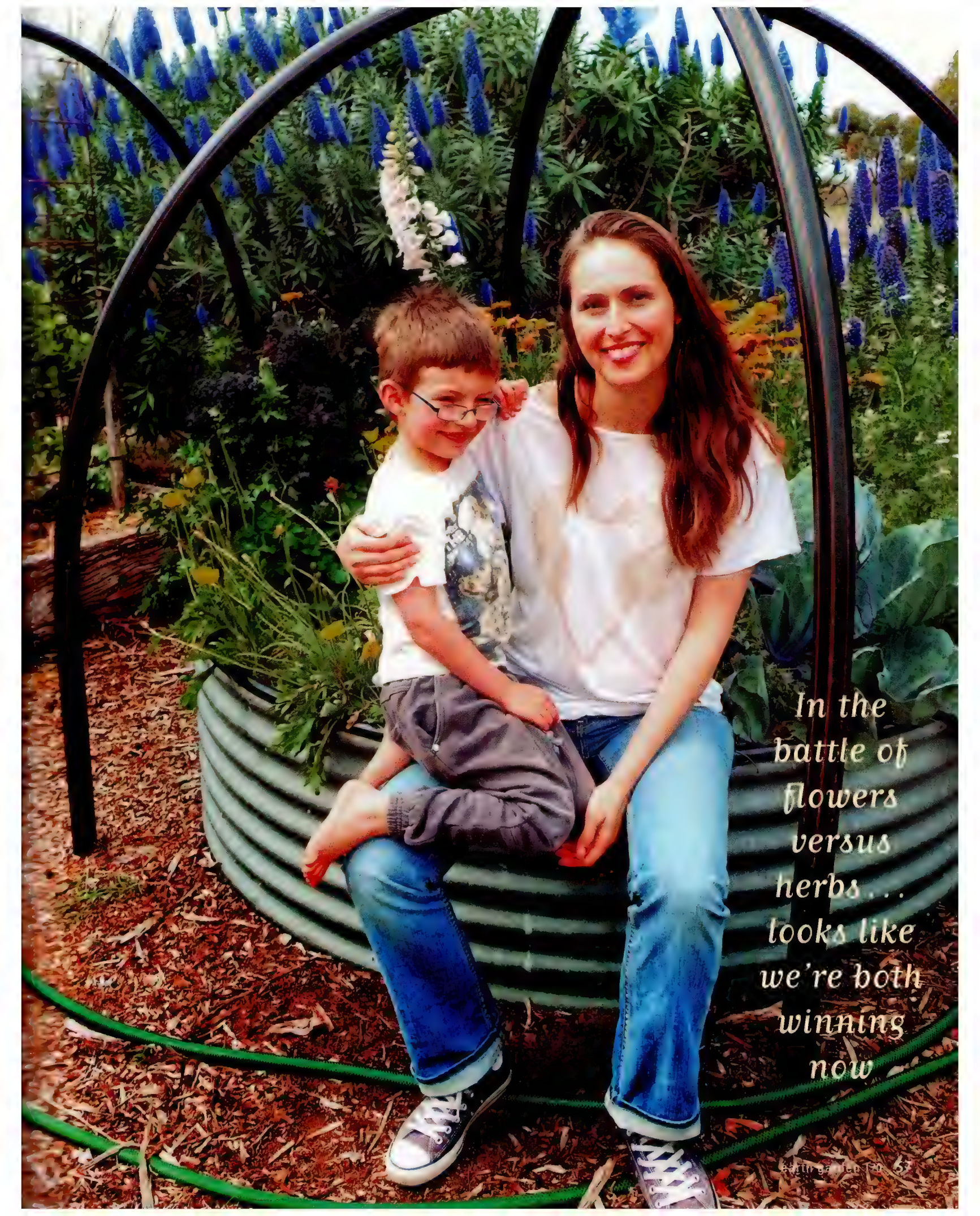
Intricate structure in the rosemary blossom.

later it would be gone and in its place might be some coltsfoot or soapwort. My green fingers itched to get stuck into the garden and bring it back to life but I believe the place was fairly well policed and random folk pulling and trimming and planting there would most likely be frowned upon. Nonetheless it was a pretty good place to sit, breathe, and through half-closed eyes imagine what it had been or could be in future.

We recently had the opportunity

to revisit this lovely garden and this time, with my son by my side, I noticed more flowers than I remembered. In the early days I was a student of herbal medicine and so only saw those plants that had medicinal powers. This time I realised that those other plants I'd been disdainful of played an equally important role in bringing harmony to the gardens as a whole. Herbs have always played a major part in my planting and now they have become the bridge between our

drive for a garden full of useful plants and my son's desire for the whimsy of flowers. So I'm guiding him towards borage, foxgloves and geraniums and he steers me back to stocks, jonquils and aquilegias. I may have hardened up in the face of adversity but he is breaking down my walls and opening up that secret garden in my heart that used to love ALL plants and flowers and not just the ones that can feed me. Either way the bees will be happy!

A woman with long brown hair and a young boy with glasses are sitting on a raised garden bed. The woman is wearing a white t-shirt and blue jeans, and the boy is wearing a white t-shirt with a graphic and grey pants. They are both smiling. The garden bed is filled with green plants and blue flowers. The background is a dense garden with many blue flowers and green foliage. The text "In the battle of flowers versus herbs... looks like we're both winning now" is written in a white, serif font on the right side of the image.

*In the
battle of
flowers
versus
herbs...
looks like
we're both
winning
now*



A FRENCH BREAKFAST

EG co-founder **Keith Smith**, of Artarmon, New South Wales, examines one of the fastest-growing members of the vegetable realm.

RADISH (*Raphanus sativus*) is the easiest and quickest of all salad plants to grow, which makes it ideal for first-time gardeners and especially rewarding for children. From sowing seed to harvest takes only a short time.

Radishes come in all shapes and sizes. Most familiar are the popular and productive 'French Breakfast' types, small oval-shaped, scarlet with white flesh and rounded tips, which are crunchy, tasty and mild. There are also turnip-rooted and long, tapering kinds.

Radishes developed from wild turnip-like ancestors in Europe and Asia and might have originated in southern Asia. We know they were grown in ancient Egypt at the time of Cheops, about 4600 years ago.

"Here in the last row the radish roots itself strongly and raises its leaves," wrote Walafriid Strabo, a gardening monk

at St Gall in Switzerland in 829. "Chew the root, though it is hot, to check a spasm of coughing." The Emperor Charlemagne, King of the Franks, also had radish growing in the gardens of his villas in the ninth century.

Our English name comes from the Saxon *rude*, meaning red or blood-coloured. In his *Herball* (1597) John Gerard described large and small garden radishes, one with a round root "fashioned like a peare or long Turnep, black without and white within", much like the description of the 'Black Spanish' winter radish.

Gerard's contemporary John Parkinson (1629) said that in Britain radishes were mainly eaten to stimulate the appetite before meat dishes, but added "the poore eat them alone with bread and salt".

You don't find many exotic recipes

for radishes in cookbooks. They contain small amounts of potassium, magnesium and sulphur and are low in carbohydrates.

Wash them well and add them whole or sliced to salads or, like the "poore", eat with bread and butter.

GROWING

Radishes belong to the Brassica family and are treated as annual or biennial plants. Sow radish seed before hot weather, while the ground is cool or all-year-round in cool temperate places.

Seeds germinate within five days and you can often eat the crisp roots in three to six weeks. They grow well in shallow soil or in containers and box beds.

To ensure a constant supply for your salads, sow a row of ten or twelve seeds every two or three weeks — or simply



Wash radish well and add them whole or
sliced to salads.

Don't leave
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ground too long
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tasteless.

Radish seeds germinate within five days and you can often eat the crisp roots in three to six weeks.

plant a few seeds whenever a spare space crops up in your garden.

A good tip is to push seeds 2.5 centimetres deep into the soil to encourage the roots to grow symmetrically. That way the skin keeps its colour and roots don't get hard or woody. Keep the soil constantly moist so the radishes grow without a check.

Thin out, to leave five to ten centimetres between plants as the roots swell. Stalks bear white or violet flowers.

You can also plant radish seeds to mark where slow germinating seeds like carrots and parsnip have been planted. Radish is a good companion plant for cucumbers and deters beetles on pumpkin, squash, melons and cucumber.

Don't leave radishes in the ground

too long or they become woody and tasteless. Another good idea is to water radishes the day before you pull them to eat.

WINTER RADISHES

Winter radishes are not so common in Australia and are quite distinct from the salad types. They grow more slowly and are slender, longer and much bigger without becoming tough.

Sow winter radishes in late summer and autumn. Slice in salads or cook as for carrot and turnips.

VARIETIES

- 'Champion' ('Cherry Belle') is a globe radish, deep red with white flesh, smaller than 'French Breakfast', mild and delicious.
- Other round red types include 'Red Prince', said to resist wilt, 'Fireball', 'Scarlet Knight' and 'Mars', which is grown commercially in New South Wales.
- 'Easter Egg' is a rainbow-coloured mix of round radishes, about five centimetres across that might be red, white, purple or pink to add colour to your salads.
- 'Red Baron' is a cylindrical type with red flesh.
- 'White Icicle' forms a tapering, ivory white root with a mild flavour, reaching ten centimetres in length.
- 'Black Spanish' is a pungent flavoured winter radish, shaped like a stumpy round turnip, with smooth black skin and crisp white flesh. They have a hot, sharp taste.

MY HOUSE IS TOO HOT

There's plenty you can do to adapt your house, and yourself, to the climate says **Bob Rich**, of Healesville, Victoria.

Dear Bob,

I hope you can help. We have recently bought a brick and tile home for the future, something easier to look after as we get older. This home was built in 1984. It seems very solid and well built but it is like a furnace in summer. It has a cathedral roof in the lounge and kitchen, carpet and tile through the house. It is situated in south-east Queensland, so the weather is usually nice.

I was told an iron roof would be cooler. The house does have insulation, but we thought changing to iron might add more. The previous owners used air conditioners, which we do not want to do. If you could help in any way with suggestions, it would be much appreciated. A lot of homes in this area seem to be the same.

Thanks for your time.

Jo.

PS: This home has a back pergola. Sun rises in the front and sets at the back.

Dear Jo,

A lot of information about climate-appropriate house design is summarised at mudsmith.net/solarhouse. To answer your main question: replacing a tile roof with iron would do nothing thermally. In fact, iron is a better conductor of heat than ceramic materials.

Second, I'd like to know if there is insulation in the cavity of the walls. I suspect that's your main source of summer heat. Bricks are quite dark in colour, and also store heat like a hot water bottle. An uninsulated brick wall can amplify outside temperatures. A

good trick would be to spray the outside walls with aerated concrete. This would provide a layer of insulation, and also lighten the colour, so the bricks don't get so hot. This treatment successfully made habitable some Housing Commission houses that were built in the 1950s in Melbourne, with 100-mm-thick concrete walls. They were refrigerated in winter and superheated in summer. The layer of aerated concrete fixed the problem.

Third, your house is oriented wrong. The pergola at the back won't keep out a great deal of heat because the setting sun gets below it. Growing a dense, vigorous climber such as passionfruit on the western wall of the pergola will cut out this source of heat, although of course it will make the western part of the house darker.

Another useful thing is to increase ventilation. You could install a ceiling vent at the peak of your cathedral ceiling. Then, opening doors and windows on the southern side would induce a nice convection current. This can be even more effective if you establish a damp garden to the south of the house, so the cross-ventilation brings in moist air, which acts as evaporative cooling.

The best thing you can do, though, has nothing to do with modifications to the house: get adapted to the local climate. You can do this in a few weeks by deliberately doing vigorous exercise in the worst heat. At first, do just a few minutes, but build up to about 20 to 30 minutes, at least three times a week. Have fun, Bob.

window sill

GARDENING

No space for a garden? No need to despair, says **Brydie Piaf**, of Randwick, New South Wales.

TYPE words along the lines of urban, indoor, window or gardening into an internet image search and you'll be inundated with a wide array of pretty, inspiring green window sills, nooks and corners. Delve a little further, and before you know it you will appear in a cloud of green, ready to take on all the

forgotten tiny spaces of your household or neighbourhood.

Whether you're sprouting legumes, managing micro-greens or growing tomatoes by the handful, this is growing on a small scale.

With the combination of a multitude of ideas and a basketful of

enthusiasm, well — you're off. On your way to greening up all those small urban or household corners.

Now what comes next depends on a few things: available space and light, and choice of plants to grow.

I've got the enthusiasm but it's the space that gets me every time.



A little thyme goes a long way (so does aloe vera).

*Whether you're sprouting legumes, managing
micro greens or growing tomatoes by
the handful, this is growing
on a small scale.*



*Seedlings
come and go
depending on
the season,
eventually
graduating to
an outside pot.*



Tomato seedlings in the nursery.

It's a little restricted around here; my outdoor garden space is limited and my potted plants are selective, so it's my crowded kitchen window sill that gets the heavy work out. Seedlings come and go depending on the season, eventually graduating to an outside pot. I experiment with growing various vegetables and I'm always collecting worm food.

Sprouting seeds is a satisfying thing I keep coming back to. While many would dismiss sprouting as not really

growing something, in some odd micro-green-thumbed way it seems to satisfy that innate sense of wanting to connect with Nature by growing something, tending it, and harvesting.

Sure, it's never going to compete with the pleasure of watering an outside garden at dusk, but it's something, and for tiny space dwellers like me it's a wonderful healthy little green something.

It's also dead easy (and an excellent project for kids). Sprouting seeds is far

simpler than growing in the traditional sense. You don't have dirt to worry about and all you really need is a glass jar, or something similar, and water. I've found mung beans the easiest, as they can often be ready to eat within 48 hours.

When using small window garden spaces I try to use things I already have and I only grow what I really like. There's no point in putting your love and care into it if it really doesn't work for you.

SPROUTED MUNG BEAN PARFAIT

This is a hippie breakfast you'll grow to love.

Quantities are entirely up to you, but I like layers of sprouted buckwheat, sprouted mung beans, raw sunflower kernels, linseed meal, natural yoghurt and some sort of seasonal fruit. Pop some mangoes in the blender for an instant taste of summer and add to your layers (dried sultanas also work really well.) It's sugar-free, protein-filled, healthy and energy-packed — a great way to start the day.

HOW TO SPROUT MUNG BEANS

What you'll need

A glass jar, say 500 ml in size.

A square of muslin and a rubber band

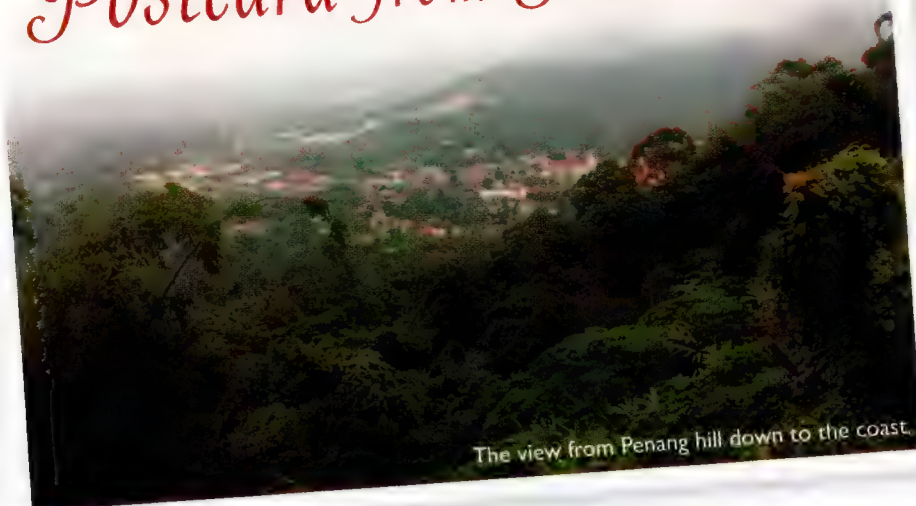
Get sprouting

Rinse half a cup of dried mung beans in a colander and then pop them into your glass jar. Add enough water to comfortably cover them three times over and leave them to it, doing their quiet mung beany thing. Eight to 12 hours later (or overnight) drain the water off and return the beans to the jar and cover it with the muslin held on by the rubber band. Or just loosely close the top of the jar (use it to help drain the water when you need to). Now watch those beans grow: they will push out little green tails over the next 24 or so hours (depending on how warm it is). Give them a good rinse every 6 to 12 hours, making sure they always stay moist.

You can get a variety of glass or plastic contraptions to sprout in. If space is tight though and a windowsill garden is all that you have, a simple glass jar will work just as well.

Brydie's sprouted mung bean parfait.

Postcard from Penang



The view from Penang hill down to the coast.

Gary Thomas, of Daylesford, Victoria, returns with exquisite food from a fascinating entrepot.

Dear Earth Gardeners,
I go to Penang and chew my way through 19 street foods, just to see what they are like.

I only get sick twice, once from an MSG overdose and once from some dodgy ice in a bowl of cendol, so I reckon that says something, I don't know what, except those foods were as good to eat as any other on the day.

I search out nutmeg juice everywhere I go.

I first met Nazlina at a "Foods of Asia and Oceania" event we both performed at last year. She is Convivia Leader at Slow Food Penang.

She completely enthralls me with the story of nutmeg — the fruit proper,

not the seed spice we are more familiar with here.

She prepares the fruit in seven different ways. I taste them all — exquisite, elegant, unique.

Like a cross between Coca Cola and Ayurveda. Straight away I know I have to find out more.

More about nutmeg, and more about the particular fusion cuisine of this historical trading centre.

So I save up, bake lamingtons, do good deeds, earn brownie points at home, call in some favours, do some future eating, you know the drill.

And go. It's the little things, the subtleties, I like to learn from experts in particular cuisines.

So in Penang I learn they always mix spices with water to make a paste before frying in the wok. This makes a lot of sense.

And how easy it is to make flat rice noodles simply by cooking together a water and flour slurry, pouring into a flat tray and steaming until firm.

Or how curry laksa is, quote, just a very nice soup, unless you add fresh ginger flower to it.

And yes, I did arrive home with my bags squashed full of nutmeg things — pickled fruit, preserved fruit, dehydrated fruit, fresh dried mace, mace oil, slow cooked fruit syrup, slow cooked syrup in rock sugar, nutmeg tea, nutmeg balm, nutmeg liniment . . .



Ginger flower. Vital ingredient in Penang curry laksa.



Note: buy noodles meant for stir frying (ask the noodles man). Noodles for soup are of different texture. Also, do not wash the noodles before cooking as they have been coated with oil already.

• Recipes from Nazlina@pickles-and-spices.com, www.pickles-and-spices.com

I joined Naz's cooking class one day to make this delicious Char Koay Teow, amongst other things.

One chef tip not mentioned in her recipe below: the very thinly sliced shallots are fried beforehand in oil until toasty, and reserved. The shallot oil is then used for the stir frying, which adds a lovely perfume to the finished noodles.

CHAR KOAY TEOW

Sauce (mix everything together)

- 2.5 tbsp oyster sauce
- 2 tbsp thick soy sauce
- 3 tbsp thin soy sauce
- ½ tbsp fish sauce
- 1 tbsp linseed oil (sesame seed oil)
- ½ tbsp black pepper
- 8 tbsp water

Green chillies pickle (mix everything together) – to serve on the side

- 3 green chillies (sliced diagonally thinly)
- ½ bowl of rice vinegar
- 1 tsp sugar
- ½ tsp salt
- ½ bowl of hot water

Marinate

600 g of de-veined fresh prawns with 2 tbsp of oyster sauce, 1 tsp of sugar, 2 tsp of freshly ground black pepper and 1 tsp of sesame oil.

Noodles (for 1 serving)

- 150 g flat rice noodles (koay teow) (1.5 kg will serve around 10 people)
- 1 tsp of dried chilli paste (less or more to your liking)
- 1 tsp chopped/minced garlic
- ¼ cup bean sprouts
- ¼ cup garlic chives cut into 2.5 cm length
- ⅓ firm tofu, cut into 2.5 cm cubes
- 1 egg
- 2 tbsp cooking oil for stir frying

Garnish

Fried shallots (which should be made in advance), wedges of lime.

Method

Heat oil (any veg oil would do, except olive oil); sauté garlic and chilli paste till chilli paste is cooked, control the fire, don't burn it.

Add in marinated prawns, cooked till they are half done.

Add in chives, tofu and bean sprouts, cook a bit and add in the noodles.

Pour the sauce. Stir evenly with the noodles over high fire. I normally put three tablespoons of the sauce for 1 batch.

Add in the egg. Let it cook on the side of the wok. Then scramble it ON THE SIDE, before you mix it back into the noodles.

Serve hot with lime, pickled green chillies and fried shallots.

LET THERE BE SPRAWL

Earth Garden editor **Alan Gray**, of Broome, Western Australia, lobbies for climbing beans to lie down now and again.

WHEN you think of planting climbing beans the first thing you think is: 'fence' or 'trellis' . . . right? Same here. But lately Judith and I have been trying a different tack. We just let our climbing beans sprawl all along the ground, covering the bed they're in.

There are heaps of benefits to this lazy gardening method. First, we seem to get nearly as many beans for dinner as if we grow them up a trellis. Amazing.

Next, the beans totally smother the

gaps between each plant so there are no weeds to mulch or feed to the chooks. Then, the beans are a green manure crop. Because they're legumes, they grab the nitrogen out of the air and make it available — via their roots — to the plants that grow next in that bed. Nitrogen-fixing is a great way to pep up a bed after a heavy feeder, such as sweet corn, or a solanum like tomatoes or eggplants. In fact, I always follow a tomato crop with a sowing of climbing beans.

I know the latest idea in urban food gardening is to grow up — and I love these creative ideas on how to grow on fences, up buildings, railway supports, and anything else vertical. But sometimes you don't have a trellis handy so there are advantages in sprawling as well. Imagine suburban verges covered in sprawling beans. I can even sprawl in the bean bed with a cup of tea and not squash a single plant. Delightful.



Woody Gray, with a freshly picked tray of snake beans from the editor's garden two years ago. The bamboo frame in the background was the last the Grays have ever used to grow climbing beans.



A bed of climbing beans without a trellis in sight.



A bean flower ready
to transform into next
week's dinner.



Lucy Young of Castlemaine in Central Victoria, describes how a community group has sprung forth to connect neglected fruit with happy local fruit harvesters.

IT WAS conceived around kitchen tables, on street corners and over community lunches. Many conversations were inspired by the Transition Network in Europe, which emphasises getting back to the garden, sharing among friends and neighbours, avoiding fossil fuels and using renewable energy, to create an alternative economy and live more simply. At the heart of Transition's 're-localisation' approach, however, is growing a local food system. Our discussions often returned to the question of how to harness, connect and grow the wealth of our gardens, our skills and our community. Growing Abundance was born.

The Harvest Group brought together hundreds of people to collect potentially wasted fruit from orchards, backyards and roadsides. Fruit has been picked,

carried, sorted, cooked, preserved and shared with schools, food relief agencies and a weekly 100-strong community lunch. No fruit is wasted: excess is fed to chooks or composted. And long after the compost has fed the next budding tree, the friendships forged and skills shared continue to provide a feeling of abundance, a recognition of what we have right in front of us.

From the word go, our project was flooded with generosity. Harvest coordinator Sas Allardice recalls fondly our first tentative newspaper article, in 2011, calling for folks with excess fruit to consider sharing.

"The first call came from Bernie. He had about 40 fruit trees: apples, pears, oranges, peaches and lemons. After a moment of panic, we set about working out what Bernie needed, how

we could respond, and we got busy! We gathered volunteers and were soon harvesting bumper crops from all over town. The halls of our little Castlemaine Community House were enriched by the aroma of harvested fruit (some left anonymously on the doorstep)," says Sas.

The arms and kitchens of our small team of volunteers were full of fruit that summer as they shared the bounty and excitement of being involved in this simple, yet ground breaking activity. Relationships quickly formed with local schools to get fresh fruit into the mouths of our young folks and our hearts were full of hope, shared stories and ideas for what else we could do.

The trees we harvested were happy too: we also removed their fallen fruit to reduce the risk of pests and diseases.



Feasting and conversation – a great recipe for social change.



Mica learning new skills spreading apple pulp at community juicing day.

Local orchardists appreciate this because neglected backyard trees often harbour pests like fruit fly. In winter we went back and pruned trees that had shared their produce with us. So volunteers not only enjoyed a share of the crop, but learnt about pruning and how to look after trees.

From humble beginnings, Growing Abundance now boasts over 700 subscribers to our weekly newsletters. These share details of workshops and harvests, handy hints of the season, recipes, other local food news and whatever we can think of.

Growing Abundance is a project to address many aspects of the food system: growing, production, distribution and consumption. We want to see a complete overhaul of our country's food system and through our (ultimately small) activities we've demonstrated alternative approaches. Like the takeover of our high school canteen: it now serves fresh, local, mostly organic food to over 600 young people. CAKE (Castlemaine Abundance Kitchen Enterprise) which provides local food catering. The sold out Local Produce Guide that lists sources so we can buy local, eat local and thus support our local farmers. Multiple partnerships such as with Loddon Prison which now grows seedlings for the Shire's community gardens.

Our contribution to the reduction of Greenhouse gases is the tip of the iceberg. The thousands of tonnes of fruit rescued since we began is a drop in the ocean, our 'market share' of food production insignificant. But the seeds of our work have blown far and wide and are taking root. Our community is proud of Growing Abundance and we work hard together to create the change we want to see in the world — to build connections with each other, our food growers and our natural environment.

Edited by Judith Gray

GARLIC

By Penny Woodward

Published by Hyland House

Soft cover, full colour, 217 pages. \$29.95 and available from earthgarden.com.au

Garlic must be one of the most influential plants in the history of humanity. It's been used for thousands of years by people all over the world for flavouring, medicinal, and spiritual purposes. This book opens the treasure chest and sheds light on a complex and mystical plant.

Garlic isn't just garlic. Use this book to discover over 50 Australian cultivars. Learn all you need to know to grow garlic in your climate. The book includes profiles on a number of Australian growers as well as heaps of recipes and preserving ideas. A book on



garlic wouldn't be complete without a good look at medicinal uses. This book has the lot.

It's a great guide for the home gardener or any aspiring commercial grower. It pays attention to the finer details, such as variations in flavour between cultivars, matching cultivar to climate and, of course, diseases.

Ever heard of black garlic? This is made from standard garlic bulbs that are kept at a steady, low heat for 30 to

40 days until the cloves become black and almost treacly. The flavour is like balsamic vinegar, sweet and syrupy, or even like tamarind. This is a technique that dates back thousands of years. Try it on a pizza.

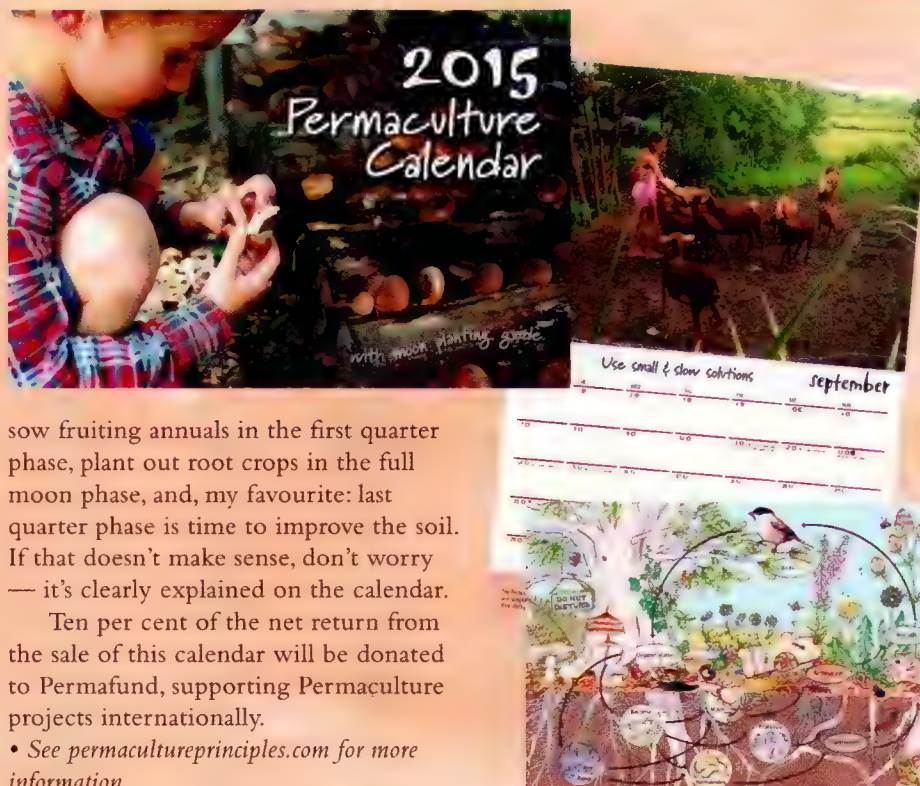
Garlic is beautifully photographed and jam-packed with Penny's wisdom and experience. It's written in an easy, accessible style. With such a positive outlook it's a must have. I want to grow fields of garlic!

2015 PERMACULTURE CALENDAR

(with Moon Planting Guide)
\$13.00.

Now is the time to be thinking about next year's calendar. Perfect for a Christmas gift, or have it on your own wall as a reminder of all the good things in life. For kids and adults alike this calendar is a daily guide to the twelve permaculture ethical and design principles. With earth care, people care and fair share at the core, this calendar shows everyday opportunities to observe the world around us, use renewable energy, use resources wisely, grow food, and make our communities better places.

Beautiful, natural photos and the simple moon planting guide make this calendar my choice for 2015. Sow leafy annuals in the new moon phase,



sow fruiting annuals in the first quarter phase, plant out root crops in the full moon phase, and, my favourite: last quarter phase is time to improve the soil. If that doesn't make sense, don't worry — it's clearly explained on the calendar.

Ten per cent of the net return from the sale of this calendar will be donated to Permafund, supporting Permaculture projects internationally.

• See permacultureprinciples.com for more information.



Savanna woodlands, and in the distance the Fitzroy River cuts through the bluffs and mesas.



The mighty Fitzroy River winds through the heart of the Mornington Sanctuary



Mornington Sanctuary supports significant populations of threatened Gouldian Finches. Photo by N E Johnston.

AUSTRALIAN WILDLIFE CONSERVANCY

Mornington Sanctuary

The Australian Wildlife Conservancy (AWC) is a not-for-profit organisation that protects more native wildlife than any other organisation in the country. They own and manage more than three million hectares of diverse vegetation types. Big statements you might say, but after visiting the Mornington Sanctuary in the central Kimberley recently I can believe it. What an adventure into breathtaking country — and the most remarkable land management model I've ever seen in action.

Mornington covers a range of vegetation types including tropical savanna

woodland, grasslands and fragments of rainforest communities. Its cattle numbers have been drastically reduced and Mornington is now home to a dedicated team of research scientists.

Much of the landscape of the sanctuary is rugged. However, the fieldwork on fire management, feral animals and weed control is generating great results and will help shape a new way of managing outback properties for conservation and Aboriginal control.

The Mornington team, using GoPro cameras mounted on the collars of feral cats, have turned up fascinating information. In large fires cats will leave their home to go to the fire front and kill all the wildlife, then return to their home range. But the cats will not bother

travelling to a low intensity fire. So if burns can be better managed by burning at the right time of year in a smaller, patchwork fashion, this can help reduce the impact of feral cats on native wildlife.

The best news of all about Mornington? Yes, you can visit! It's open to the public during the Dry season. There are wonderful bush camping facilities and there's even safari hut accommodation. Camp and lap it up. Swim in the waterholes, walk the tracks and keep an eye out for the threatened bird species such as the spectacular Gouldian Finch, whose numbers are increasing along the creeks and gullies. This is paradise for bird watchers, naturalists or anyone passionate about a wilderness experience.

• For more details visit australianwildlife.org.

By the way, I've also been reading . . .

Treason, by Brian Walters revisits the stories of the plots by the German military to assassinate Hitler. This is a rarely-discussed 'angle' of WW II. *Treason* is a fabulous iPad-only, interactive e-book crammed

full of embedded historical video footage. It's a gripping reading experience. \$32.99 downloaded from the iTunes Appstore.

Optimism: Reflections On A Life Of Action by Bob Brown, is a very personal account. When you read this book you feel like

you really know this inspirational Australian figure — like he's your mate. *Optimism* is an understatement for someone who's displayed such endurance throughout his whole life. Published by Hardie Grant Books, \$39.95. bob.brown.org.au

Edited by Alan Gray

GO SOLAR WITH NO CASH

Earth Garden's Business Manager embraces the latest trend to go solar with no cash upfront.

If you don't have a spare pile of cash hanging around but you still want to have a solar rooftop, why not try Vivienne Hamilton's method? Vivienne is Earth Garden's Business Manager, and she's just signed up for a 3-kW solar rooftop system through a local community bulk-buying group. Then she signed up for a Green loan at a discounted interest rate. It's worked out to be a brilliant success and Viv's ended up with a 3 kW system fully installed with high-quality Trina panels, an Aurora inverter, and a properly-angled tilt frame (\$600). All for less than \$5300.

The total interest payments over five years are only around \$800. So Viv has a large, fully installed solar power system with repayments of around \$99 a month. Loans taken out over ten years instead of five will almost certainly be covered by the power bill savings.

"I've wanted to put solar on my house ever since I moved in, but haven't been able to afford any other schemes. The bulk-buy combined with the accessible Green loan finally made it achievable," Vivienne said.

THE HUB FOUNDATION

Neil and Heather Barrett are based in Castlemaine in central Victoria. They've been involved in climate change and renewable energy projects for many years. They recently established The Hub Foundation to further their work to help reduce the local shire's — and the planet's — CO₂ emissions.

The Foundation made the solar rooftop bulk-buying offer (MASH+) to locals in May 2014 and 360 households registered their interest in short order.

PAID

Tax Invoice To

V Hamilton
 Castlemaine VIC 3450

Tax Invoice

Tax Invoice #

Date	Terms	Due Date
21/07/2014	Due on receipt	21/07/2014

Description	Qty	Tax	Price	Tax Aml	Serviced	Amount
3kW Inverter Aurora PVI3000	1	GST	1,595.00	159.50		1,595.00
PV Panel 250W Trina TSM-250PC05A 35mm	12	GST	219.60	263.52		2,635.20
Labour, Rails, Cabling, Energy Assessment and Voucher.	1	GST	1,389.90	138.99		1,389.90
DC Isolating Switch 1000V	2	GST	38.13	7.63		76.26
AC 20A weatherproof Isolator IP66	1	GST	40.00	4.00		40.00
Inspectors Fee for inspecting Electrical Installation	1	GST	200.00	20.00		200.00
REC Discount		FRE	-1,900.00	0.00		-1,900.00
BULK BUY 3kW Aurora Inverter with 12 x 250Watt Trina Honey PVs. Tilt Frame Extra.						4,036.36
Tilt Kit for Raising PV Panels	12	GST	50.00	60.00		600.00

PLEASE NOTE: Terms are strictly 100% payment on receipt of this Invoice.

Subtotal	\$4,636.36
Tax	\$653.64
Total	\$5,290.00
Payments/Credits	-\$5,290.00
Balance Due	\$0.00

Viv's actual invoice.

More than 50 per cent of the registrants said the number one reason they want solar was to help cut CO₂ emissions.

"We think that's wonderful," said Neil.

There are four elements to the bulk-buy offer.

1. Solar panel installation at discounted prices (for instance, \$4630 for a 3 kW system and \$7169 for a 5 kW system).
2. An energy assessment included in the price (valued at \$80).
3. A \$150 voucher for energy-saving products.
4. A free solar panel installation on a community building, valued at \$7000.

A truck delivered around 700 panels for the first 50 paid-up customers for the bulk-buy scheme in Castlemaine in late August.

"This first bulk order will save our shire and neighbouring shires 175 tonnes of Greenhouse gas emissions each year," said Neil, "or a total of 3500 tonnes over the lifetime of the systems".

People without the spare cash for this scheme enquired about a loan from the Community First Credit Union at just over six per cent interest.

"Early indications are that the folk at CFCU have been great to deal with. If paid off over ten years a loan for a 3 kW system will cost \$52 a month in repayments and interest. Contrast that



The panels go up on Viv's roof in September 2014.

with the benefits: put simply, a family paying 29 cents/kWh from the grid and using 50 per cent of the solar it produces should save around \$60 a month on its power bills," said Neil.

The project has been a big hit with local residents.

"I love what I have seen of the MASH+ project. Good visibility via the Hub and the newspaper articles (the 'Solar Matters' column). It seems to be filling a good space with the focus on domestic PV. It's given some momentum to the energy solutions space I think," said Cam Walker, a Castlemaine resident and Campaigns Coordinator for Friends of the Earth Victoria.

"It felt great to look up on the

roof and see all those panels generating power to the house. It's not really about savings as we are very frugal and the feed-in tariffs are so bad now. It's about thinking about the health of the planet on a global scale and being able to do something on a local scale. The MASH+ scheme seems to have been a phenomenal success and I hope it inspires other communities or organisations to do the same. It's really helping those of us who otherwise would not have been able to afford to contribute to a renewable energy future. I'm really grateful for the hard work of the volunteers at the Hub Foundation who put this together," Vivienne said.

But Neil and Heather aren't resting

there. "Three big electricity retailers — Origin, AGL and Energy Australia — have recently been strongly opposing the Renewable Energy Target. This has led Greenpeace to set up the Green Electricity Guide* to help consumers figure out who are the goodies and the baddies in the battle over renewable energy. The goodies, according to Greenpeace, include Powershop, Momentum, Diamond and Red," said Neil.

*<http://www.greenpeace.org.au/blog/green-electricity-guide/>

• For more details about the MASH+ project visit: hubfoundation.org.au

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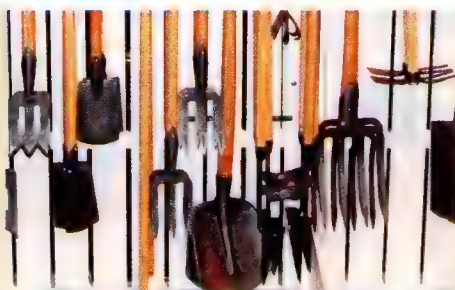
For almost three decades Brian Keats has been compiling and publishing state of the art calendars to meet the needs of farmers, gardeners, weather watchers and naked eye astronomers. The Astro Calendar is based on Biodynamic practices. The Moon Planting Primer is a simpler version.

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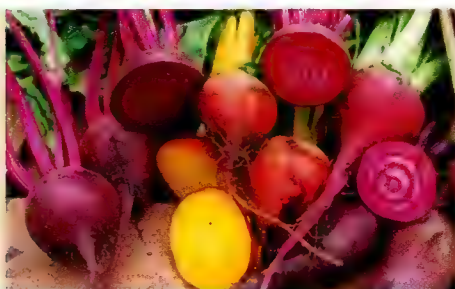
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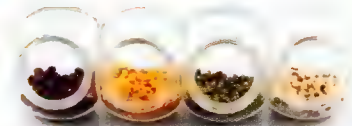


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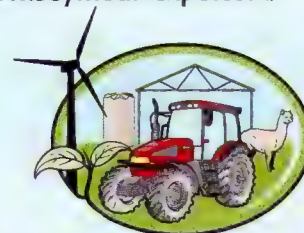
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FOR ALTERNATIVE ENERGY APPLICATION**
3 Models to choose from: 280L, 185L & 100L



Both the 280L & 185L include:

Gas/240V • Push button ignition • Interior LED light
Huge 60L freezer compartment in the 280 model
and 45L freezer in the 185L
Flame indicator & safety valve • Adjustable wire shelves
Rear wheel runners • Reversible doors

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www.dprefrigeration.com.au



HERITAGE RANGE Modular Garden Bed

CHEMICAL FREE TIMBER

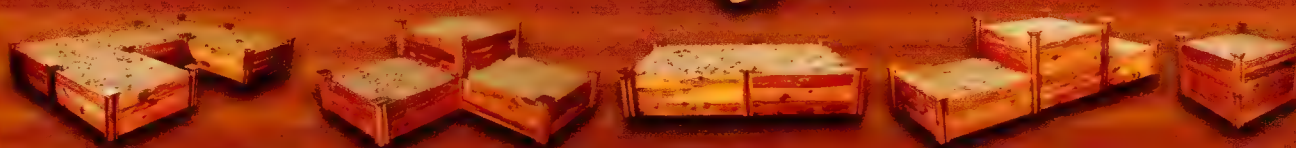
BEDS ASSEMBLE IN MINUTES

MADE FROM DURABLE CYPRESS

STRONG DOVETAIL JOINTS, NO TOOLS REQUIRED

AUSTRALIAN-CERTIFIED GROWN TIMBER

NATURALLY RESISTANT TO TERMITES



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*down tools and fire up
the internet... we made
you a new website*

earthgarden.com.au

*dig into it ...
the Good Life awaits*

- ✓ gift cards
- ✓ free EG newsletter
- ✓ editorial videos
- ✓ massive book discounts



Introducing the.....

LIFEHOUSE



The LIFEHOUSE is a new concept in sustainable architecture that allows you to personalise the design in a number of ways while keeping a fixed design cost. You also benefit from reduced waste during construction, maximised passive-solar design and a high energy rating. This is a beautiful home for the future.

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Build retaining walls raised garden beds fences & house walls



*....quickly and simply
in concrete, rock or earth*



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Simply builds walls

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Wobble-Tee

Water Efficient Sprinklers



If you like your Wobble-Tee
you will love the Clever Drop!

Design based on the Australian
AWARD WINNING
Wobble-Tee Water Efficient Sprinkler



Clever Drop

- Ideal for small lawn/garden areas, waters up to a 8 metre diameter.
- Low angle of trajectory reduces wind drift.
 - Removable filter.
- Operates on low and high pressure from 5 to 50psi, average flow rate of 4LPM.
- Adjustable angle base for uneven surfaces.
 - Purpose shaped base for roof cooling.
- Ability to run more than one from the same tap.

"Just Like Slow Soaking Rain"



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AGnVET, Bunnings,
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Wobble-Tee

- Waters a large area up to 15 metre diameter.
- Applies water slowly, evenly with no misting at pressures from 15 to 40psi. Average flow rate of 10LPM.
- Will operate from a town water supply, pressure pump, overhead water tank, gravity fed system, recycled water, effluent re-use, dam, bore or grey water.
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 - Removable filter.

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*Help provide
sustainable living
solutions to Himalayan
communities*

JOIN THE EARTH GARDEN FOUNDATION

32nd PROJECT COMPLETED, 33rd APPROVED

A stunning quarter of activity for EGFA, since the spring issue went to press, has seen our most ambitious project successfully completed. The Dullu Hospital is an important regional facility for 150,000 people spread over ten villages in far western Nepal. The hospital's broken down solar power system was completely renovated by EGFA with new wiring, batteries and inverters. And EGFA's 33rd project, at the Shreechaur health post in Okhaldhunga district, has been approved by the Board of directors, so we can start fundraising for Project 34.



Dullu Hospital Management Committee members gathered for welcoming and thanks giving ceremony.

NO ADMIN COSTS

Earth Garden continues to absorb all administration costs of the Foundation. So every dollar donated gets solar lighting into remote Nepali health posts via EGFA's project partner, the Himalayan Light Foundation.

\$66 per year for a family or individual membership, sees every cent delivered to needy Himalayan communities to install solar lighting plants in health posts and schools.

DONATIONS ARE TAX DEDUCTIBLE

1. SECURE WEB ORDERING:

Visit the Foundation's webpage at www.earthgarden.com.au/foundation.

You can pay via our secure online system using either a credit card or direct deposit.
OR

2. Add details below and post with your cheque to: EGFA, PO Box 2 Trentham, Vic, 3458.

Name: _____

Address: _____

Postcode: _____

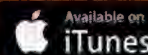
Email: _____



EG-MAG
IS ALSO
AN
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PIXELS
NOT PAPER
SEARCH EARTH GARDEN



NSW



UNIQUE PROPERTY. Minutes to Scotts Head on NSW Mid North Coast. Mix of bushland & cleared land. Abundant wildlife. 3 good size bedrooms & large front deck. Shaded patio behind. Single garage. Separate large studio. Macadamia, citrus & mango trees. \$449,000. Michael 0407 283 326 Nambucca Mackville Real Estate. 📷📍



STRAW BALE HOUSE. Craftsmanship built 2008 + liveable colorbond shed. 4 acres.

company title MO Lillfield, 3 bed, off-grid solar power 2,5kw, compost toilet, wood heater, water tanks, fruit trees. Low cost of living in sustainable environment. \$249,000. Email: helenep26@gmail.com or call +46 706 236 303 📷📍



200 ACRE PROPERTY with 1 km riverfront, Tomakin, South Coast, NSW. Unique timber three bedroom home overlooking Tomaga River. Double garage, stables, veggie patch, 10 acres cleared and fenced for stock. Minutes to local

beaches, schools, shops. Ideal for swimming, fishing, canoeing, bushwalking, horse riding etc. Phone Wes 0427 304 645. \$990,000 neg.



QLD



QLD LIFESTYLE RETREAT, Booyal 293 acres, fully fenced, dams and permanent water holes. Stand alone solar power/hot water. Currently running 30 drought masters, 30 goats, stockyards crush, three bedrooms, two bathrooms, three machinery sheds. 25 km Childers, 75 km Bundaberg, 4 hr drive Brisbane. \$490,000 Contact Mary 0424 556 257. Email tequila22009@hotmail.com 📷📍

BEAUTIFUL ORGANIC LIFESTYLE property for sale in the Fraser Coast region of Qld with spectacular views out to Fraser Island. Features include: 26 organic acres, Fully

LANDLINES — For buying, selling, seeking or sharing houses and land. Landlines are prepaid and include your advertisement on the *Earth Garden* website for three months.

PRICES (all include a fee for one photo. Minimum price \$130)

\$130 for up to 50 words;

\$230 for up to 100 words;

\$330 for up to 150 words;

\$430 for up to 200 words;

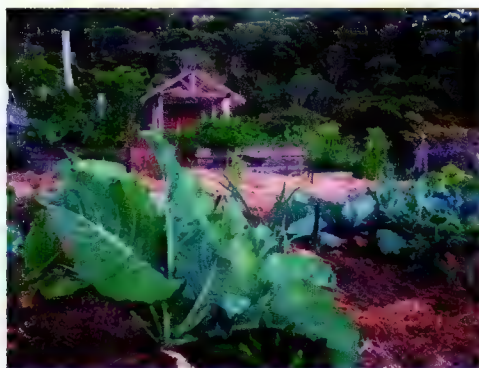
\$530 for up to 250 words.

Please check your word count carefully as an overrun may result in delayed publication. You can add photos for \$30 each. All photos should be at least 800 pixels wide.

All Landlines should include contact details.

The deadline for the March 2015 issue is High Noon 29 Jan 2015 by secure credit card ordering on our website www.earthgarden.com.au or by emailing lineads@earthgarden.com.au for credit card payment over the phone. You **MUST** type your ad by online ordering or by email. We can take your payment, but not your ad, over the phone — (03) 5424 1814.

QLD cont'd



restored Queenslander; 2 full bathrooms - 1 is a large walk-in dual shower room, 3 toilets, large country kitchen, wrap around verandahs, fully self-contained unit with full kitchen and bathroom, extensive list of eco features, large auto-reticulated vegetable garden, mature orchard, large secure house and poultry yards, 2 seasonal creeks and dam, 80,000 litres plus stored water, wood heater and reverse cycle aircon. Asking \$589,000, Email: busruns@yahoo.com.au, PH: 0409 952 068 📷📷📷

MOUNT CHALMERS. Five minutes to the Cawarral school, servo, shop and tavern and 20 minutes from Yeppoon, Rockhampton and Emu Park. Steel framed, two bed cottage on 1 acre that backs onto State forest. It has its own bore, two 20 thousand litre rainwater tanks, shed (for small car), split system aircon, dishwasher and newly renovated floor coverings and paint. Abundant bird-life and a beautiful creek create a private and peaceful sanctuary perfect for



writers or artists. For more photos, view on realestate.com.au, or contact: Lu Sammut 0402 205 756 or lu@baxters.com.au 📷📷



GATEWAY TO THE SOUTH BURNETT REGION. Attractive property providing lifestyle in safe, healthy environment, totally secure and private. Elevation 450m, with view to Benarkin State Forest. Blackbutt: rural village; town population approx 1500; situated top of Blackbutt Range, approx two hours northwest of Brisbane. Property is 28 acres of undulating land protected by Oldhamii bamboo trees providing windbreak for orchard. Main crops are mangoes and macadamia nuts, north facing. Potential for development of family business. Definitely worth a visit to realise how unique this location is and quality of infrastructure. House is steel frame, 4 bedroom, ensuite and bathroom, 7 years old, magnificent outlook, 22,000 gal water storage. Option to add further dwelling. Price - \$695,000 [bank valuation 2010 was \$900,000.] Janelle 07 4163 0052 📷📷

VIC



SW TOWN HAVEN, MORTLAKE. 50 km coast, 1 hr Grampians. 3 b/r 1980s BV Family home. Well designed passive solar, fully insulated. Solar HWS, room for solar PV. 2 Titles = 2316 m². 55,000L tank water and town. Cook-on wood heater, gas stove, ceiling fans. Established extensive garden, including native trees, vegies & orchard. Garage, workshop, carport plus 3 car lock-up shed with power. Short walk to supermarket, main street, Tea Tree Lake & sports facilities, inc. 50m Olympic swimming pool. Excellent schools & health facilities. Price reduction \$240,000 ONO. Contact John, Ph: (03) 5599 2499, Email: jgrattonwilson@yahoo.com.au. 📷📷



BRADVALE CHURCH 55 km S/W Ballarat. Historic weatherboard church adjoining beautiful two-storey home on half acre. Three bedrooms, study, open plan living/dining, fireplace. Two bathrooms. satellite internet. Reverse cycle A/C, 1.64kw grid connected solar. 22,500 lt water

tank. Bore with pump. The 9mx6m church hall has been used as an inspirational space for various arts/crafts through the years, but consider it a blank canvas limited only by the imagination of the purchaser. This home is the perfect place to start an inspiring, creative, eco lifestyle. Central location to numerous tourist destinations. \$380,000. Bradvale Church on Facebook: <http://www.facebook.com/pages/Bradvale-Church/601770146586828>. Email: bradvalechurch@gmail.com. Phone Peter 0404 888 244. 📷 📞



DUNOLLY. CENTRAL VICTORIA.

'Wattle Flat' - potential eco-village. 3 bed. solar strawbale, comfy eco-home on 3 acres with orchard & lots of native shrubs & wildlife on the edge of town. Low cost living. Short walk to all amenities. Set on 3 flat acres with planning approval granted for subdivision and 3 more homes. Your own potential permaculture village! Asking just \$185k for fast sale. Email: kate@ballaratrealestate.com.au. 📷 📞

THE METCALFE SUSTAINABLE LIVING PROJECT. After ten years in a planning and bureaucratic labyrinth, we have finally emerged from that convoluted process with two blocks for sale . . the first stage of the Metcalfe Sustainable Living Project. The parcel of land (20 acres) is in the township of Metcalfe, which is located 15 minutes north of Kyneton in central Victoria. Around half the acreage is mapped as habitat. Each of the two lots (plus any future subdivision) have covenants on title to encourage sustainable living initiatives and protect habitat land. Our policy is to sell the land at a premium price, while at the same time creating a carefully thought out show-bag of financial incentives and discounts, tailored to the aspirations of each buyer. The



subsidies and discounts are substantial.

Lot 2: 5575 m². \$180,000.

Lot 3: 7933 m². \$205,000. Contact: Jenny Stewart on 0408 389 071, metcalfesustainablelivingproject.com. 📷 📞 📧

SA



MUD BRICK BARN – Passive solar design, 2.7 acres country living, established trees, 800 metres from River Murray, 5 km from CBD Murray Bridge, 80km freeway to Adelaide. Organically managed, sustainable living, chicken coop. Post and beam construction, cathedral pine board ceilings, Baltic pine features in large kitchen/dining overlooking native gardens. Cyprus pine floors in large lounge, French doors to patio deck areas, jarrah staircase to loft master bedroom with pine flooring.

Laundry/bathroom lined with huon pine. Two reverse cycle split systems air conditioners. Two sheds. Council approved extension plans. Three phase Power; water connected. \$285,000 – Private sale call 0433 253 800. 📷 📞

TAS



20 ACRES, LILYDALE. 3 bedroom two storey cottage, large sunroom, new kitchen and bathroom, 3 bay garage, separate studio, tool shed. 12 acres of bush, great views, permanent mountain stream, dam, 7.5 acre paddocks. 1 km to Lilydale, 20 mins to Launceston. \$450,000. Email leon@langedesign.com.au for more information and photos. 📷 📞

RENT/SHARE



PEACEFUL ESCAPE on Tasmania's north east coast or a rewarding sea/tree change. Charming cottage with stunning ocean views, 40 acres (16 ha) of private pasture/bushland, close to beaches, fishing, kayaking; 45 mins to Freycinet National Park and Bay of Fires; 90 mins to airport. Friendly St Mary's community. Continual pure mountain spring water; large veggie garden; stand-alone solar power and hot water - minimal expenses. Semi-furnished if required. Lease available March 2015 for 8-12 months, \$125.00 weekly. Experience on a country property an advantage. Contact 0438 297723 or jak.isaksen@fbcnorth.org.au. 📷 📞

1972-NOW
SUBSCRIBE & WIN



GO POTTY

Subscribe to Earth Garden

You might win two wonderful
self-watering pots from GreenSmart.

Ten lucky Earth Gardeners will win two large
pots each – worth \$159.95 a pair!

Visit earthgarden.com.au or call (03) 5424 1814 and simply set
up a one, two or three year subscription for your chance to
win. If you already subscribe and your subscription is current,
you're automatically in the draw. Good luck! *

THE PRIZE

GreenSmart's self-watering pots are the container gardening solution that allows fresh organic herbs and vegetables to be grown at home in less space and with very little effort. Designed in Australia out of a growing need for fresh organic produce, GreenSmart's self-watering pots produce 30% higher yields than traditional methods with no digging, weeding or watering required. Our unique self-watering system ensures your plants receive the exact amount of water they need each day so you never have to worry about over-watering or under-watering your plants again – simply fill up the water reservoir once a week via the clear water level indicator and watch your plants grow! greensmartpots.com.au

* Winners will be drawn at random from all current subscribers up until 12 noon on 3 February 2015. Winners will be notified directly, plus announcements may be made on EG Social Media sites and in the journal. Competition open to Australian residents only. Prize consists of two large GreenSmart pots – to ten winners, including delivery.

SUBSCRIBE • SUSTAIN • SAVE

THE GOOD LIFE BOOKS AND TOOLS

FAN FORCED COOKING STOVE

\$138 incl p & h

The perfect companion for the Kelly Kettle. This sturdy, fan-forced cooking stove runs on twigs, pine cones, leaves, cardboard – any solid fuel. The genius of this stove is its adjustable, battery-powered fan that massively increases the cooking temperature (2-3 times higher than traditional stoves), eliminating smoke. Cook a full meal from the scraps lying around your campsite or weekend. Fossil fuels be gone! One charge from 2 x AA batteries (not included) gives up to 20 hours of cooking time. It weighs only 800 grams packed in its carry bag, yet it's so sturdy it'll hold a 22 kg pot. It's brilliant.



See the video of EG editor, Alan Gray, using the stove at: earthgarden.com.au.

HOBO STOVE for Kelly Kettle

\$27 incl p & h

This little accessory will turn the firebase of your Kelly Kettle into a safe and effective camp stove for your pot or fry pan. Made from durable stainless steel the Hobo Stove fits compactly inside the large cook set for easy storage.



KELLY KETTLE – COMPLETE KIT

\$162 incl p & h

Never again pay for land-filling gas canisters to boil water when you're camping, on the road, or hanging out at your bush cabin. This superb Irish invention will boil 1.5 litres of water in only four minutes, simply from twigs, leaves and other dry material on the ground. It's a hollow stainless steel 'chimney' that you fill with water. I use it whenever I can, highly recommend it, and love it to bits! Eco-friendly, great value, fun to use, and durable.



See the video on our webpage

— Alan Gray, Good Life director

EG-EMBOSSED LEATHER SATCHEL

\$167.00 incl p & h

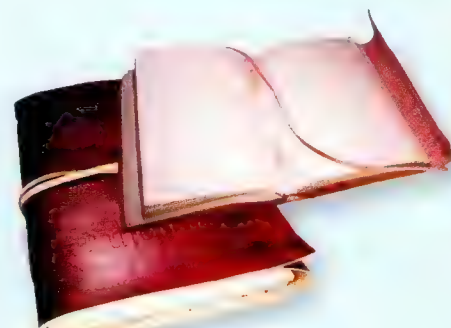
Some magazines celebrate a revamp with a baseball cap and logo. Not Earth Garden. This leather satchel from Rajasthan, embossed with the new EG banner, is a perfect companion for carrying the new bespoke Earth Garden journal. Chemical-free tanning by craftsmen with natural plant dyes using 300-year+ traditional methods. Canvas lining, zip pocket inside, 40 x 35 x 10 cm; large enough for A4 books, laptops, etc. Removeable shoulder strap. An enduring treasure.



EARTH GARDEN NOTEBOOK

\$38.00 incl p & h

200 pages acid-free, handmade paper. Hand-stitched into a beautiful leather cover embossed with the new EG banner. Whether you're sitting in the garden sketching your favourite plants, writing a poetic ode to your sunflowers and bees, sketching a life plan, writing a novel, or just recording the changes in your garden ... the EARTH GARDEN NOTEBOOK is your perfect companion. Made in Rajasthan with the same ancient tanning and dyeing methods used to make the popular EG Satchel. Approximately A5 size.



FRUIT SAVER TREE NETS

Small 1x1x1.5m

\$46 incl p & h

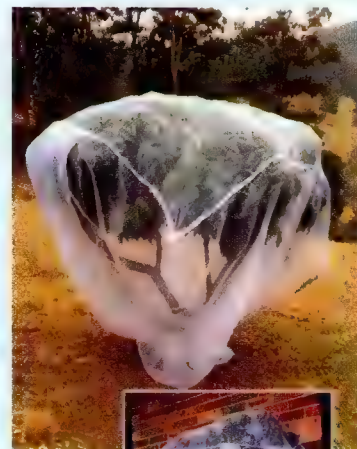
Standard 2x2x11m

\$67.00 incl p & h

Large 2.5x2.5x13m

\$86.00 incl p & h

The box-shaped Fruit Saver nets are perfect for organic fruit production. These hardy and protective nets are from white, UV-stabilised HDPE 2mm netting. They're easy to drape over a large fruit tree with two people and broom handles, and will not snag birds or wildlife. With the overlapping pleats on one side the nets are easy to install and then access continually throughout the harvest season. This is a well thought-out product. Versatile and environmentally friendly.

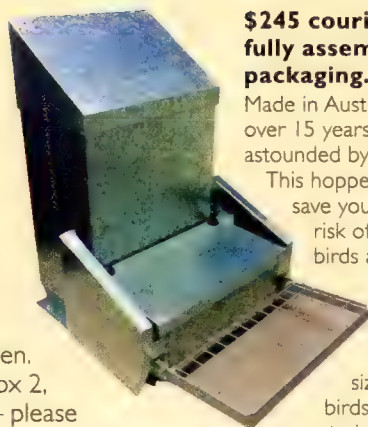


THE GOOD LIFE BOOKS AND TOOLS

CHICKEN FEEDER COMPETITION

WIN a Chicken Feeder!

This marvellous unit could be yours – just tell us the best story about your chickens. And we'd love to see a happy snap of your feathered friends. Email goodlife@earthgarden.com.au, or write to PO Box 2, Trentham, Victoria 3458 – please include a phone number. Entries close 1 February 2015.



THE CHICKEN FEEDER

\$245 couriered to your door fully assembled in recycled packaging.

Made in Australia and perfected over 15 years of use, we have been astounded by the quality of this unit.

This hopper style treadle feeder will save you money on feed and stop risk of contaminants from wild birds and rodents entering your feed. The operation of the feeder cannot harm your chickens and is suitable for small bantam sizes through to larger birds. Includes instructions on training and requires little maintenance. Make an investment for your flock!



CULTURED BUTTER KIT

\$37 incl p & h

This kit contains everything you need to make handcrafted European style butter in your own kitchen. This kit uses live cultures for an authentic, farmhouse flavour and includes enough culture for up to 9kg of delicious, creamy butter. Package comprises 1 litre glass jar, stainless steel mixing ball, live culture, wax paper sheets with sealing stickers, artisan salt and recipe sheet. Use 500ml fresh cream to make 190g of fresh cultured butter each time.

GREENSMART POTS

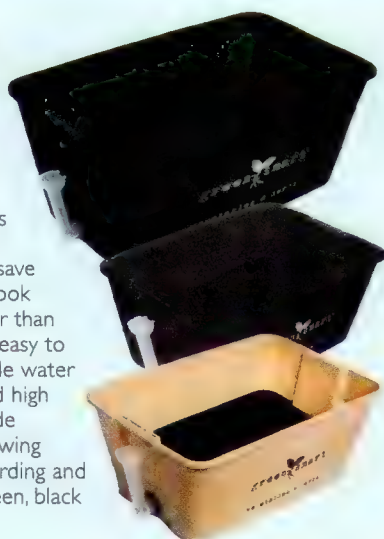
Small (57x40x23cm)

\$69.95 incl p & h

Large (74x44x29cm)

\$79.95 incl p & h

Perfect for inner city balconies or sprawling country gardens, these ingenious wicking pots save water, lower your workload, look great and grow produce faster than conventional planters. Smart, easy to use and design features include water indicator, overflow outlets and high quality UV-resistant, food grade plastics (BPA-free). Make growing fresh, healthy produce a rewarding and ethical reality. Available in green, black & cream.



SAUSAGE MAKING WITH PETER FORD

DVD, 59 Minutes

\$40 incl p & h

Making sausages is an effective way to utilise all cuts of meat and this DVD demystifies the process. Renowned chef Peter Ford takes you through every step explaining the equipment required, cuts of meat, butchering, grinding, spicing, pressing and tying up. Varying methods from across the world are demonstrated in an easy to understand manner and many recipes are included. Perfect gift for the meat lover in your life!



THE ART OF PRESERVING

DVD, 94 Minutes \$39.95 incl p & h

In this 94 minute DVD, Australian chef Peter Ford covers dehydrating, making pastes, jellies, basic cheese and butter, relishes, chutneys, pickles, jam, gravlax, jerky and passata. Thoroughly reviewed and trialled by the Earth Garden team, this DVD is down to earth, simple and inspiring. If you have basic equipment and know your way around your kitchen this DVD will encourage you to experiment and make beautiful and satisfying preserved foods. The recipes are included on the inside cover so you can take it with you into the kitchen.



FROMAGE KIT

21x14.5cm

\$75 incl p & h

Designed to be the perfect gift for those who love making gourmet goods themselves and beautifully packaged to resemble a large wooden box of cheese, this kit includes everything you need to create marinated Feta or Queso Fresco in your own kitchen over and over again. Gift box contains cheese mold, quality ceramic cheese pot with pressing plate and lid, rennet, citric acid, cheese salt, thermometer, cheesecloth and wipe-clean recipe card and instructions. Just add fresh milk!



THE NATURAL SOAPMAKING HANDBOOK and THE NATURAL SOAPMAKING COOKBOOK with 77 recipes

Mariana Tadiello & Patrizia Garzena

\$39.80 price includes both books

From the authors of the hugely popular *Soap Naturally*, which is long out of print, come two new titles which we are offering as a package! Clearly explaining all aspects from fundamental ingredients, equipment and workplace setup, this set of books covers all modern handmade techniques enabling you to make skin-soothing, eco-friendly, sustainable soaps. With an emphasis on frugality and healthy living Marina and Patrizia guide you through each step to ensure you get the most out of every batch!



For these and more, visit earthgarden.com.au, phone: (03) 5424 1814 or email: goodlife@earthgarden.com.au

tested and used by the Earth Garden crew

BACK YARD FARMER LIBRARY VOLS 1 - 11

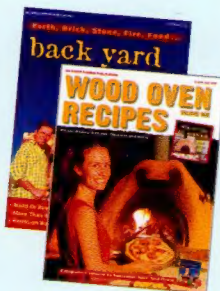
**\$200
worth of
books for
only \$50**

This collection is a must for any Earth Gardener who has not already enjoyed the Back Yard Farmer series. Inspiring stories filled with practical know-how. Learn about free ranging your chooks and milking your cows to growing vegies from seed and DIY hydroponics. Great recipes too! 80 pages each.



THE OVEN BUNDLE BACK YARD OVENS Vol 1 + WOOD OVEN RECIPES \$19.95 each or both for \$35

Earth, brick, stone, fire, wood - if you've ever imagined building or owning a backyard oven, this will inspire you through real life experiences of back yard ovens near you. Learn to cook a range of perfect entrees, main courses, desserts, pastries and breads in the recipes book devoted to wood oven cooking. Jam-packed with tips and advice to ensure your pizza party goes perfectly. Each book 80 pages.



THE JACKIE FRENCH DUO THE HOUSE THAT JACKIE BUILT + THE EARTH GARDENER'S COMPANION \$19.95 each

or both books for \$25

Jackie needs no introduction as Australia's favourite organic gardener and the Companion book is a month-by-month guide to what you can do in any organic garden. The House That Jackie Built is a personal guide on how Jackie built her own stone home and is valuable to anyone interested in stone paving, floors, paths, ponds, or even an entire house! Each Book 80 pages.



CHOOK WISDOM, MORE CHOOK WISDOM, & EVEN MORE CHOOK WISDOM \$19.95 each

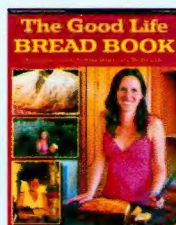
**or 'The Chook Basket':
all three volumes \$55.00**

These three highly-successful, practical books are written by Australian chook keepers, for those who keep chooks and those who just love 'em! They're overflowing with superb colour photos, ideas, advice, stories, wisdom and the natural delight that come from experiencing chook-life. 80 pages each, full colour.



GOOD LIFE BREAD BOOK \$19.95

Learn how to make your own sourdough, bake damper in a camp oven, superb fruit loaves, German rye bread, perfect pizza dough and much more. Superb colour photos. 80 pages, full colour.



CITY PERMACULTURE VOLS 2 OR 3 \$19.95 each

**or 'The CP Deal':
both volumes for
\$35.00**

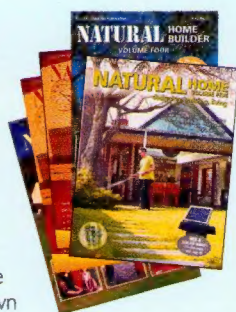
Jam-packed with great ideas, gorgeous colour photography and permaculture-inspired food production. From city bees and urban goats to edible garden walls and nature strips, read real life stories about the good life in our towns and cities. Each book 96 pages, full colour.



NATURAL HOME BUILDER VOLS 1-5 \$19.95 each

**or 'The Stack':
all five volumes
\$65.00**

These books will motivate, educate and encourage you along the road to creating your own sustainable home. From strawbale and mudbrick to stone and recycled timber, it's all here to show you how you can make your dream home happen while still treading lightly on the Earth. Each book 80 pages, full colour.



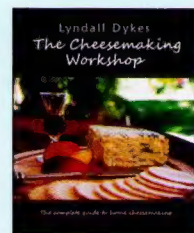
GARLIC Penny Woodward \$29.95

Garlic is not just garlic, it is Creole, Rocambole, Purple Stripe, Turban, Silverskin and more and it has been close to people's hearts, minds and stomachs for a very long time. Its flavour can be hot, spicy and pungent but also sweet and nutty. This book describes more than 50 Australian cultivars, includes guidelines for growing organic garlic around the country and recipes for cooking, preserving and smoking, medicinal uses and an extensive list of growers and suppliers. Meet some of Australia's growers and find out how and where they grow garlic.



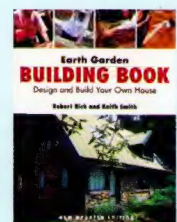
THE CHEESEMAKING WORKSHOP 2nd Edition Lyndall Dykes \$57.95

Lyndall Dykes is passionate about homemade and sustainable food and takes workshops on cheese making around Australia. With easy to follow step by step recipes to over 20 cheeses ranging from camembert and blue vein through to feta, haloumi, ricotta, cheddar and four types of goats cheese this is a truly complete guide. This popular book is spiral bound, making it easier to use in the kitchen and includes plenty of mouth watering recipes that will showcase your homemade cheese! 250 pages, paperback. Great gift.



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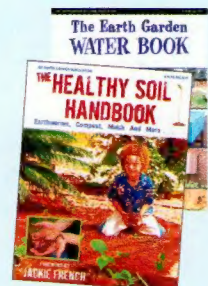
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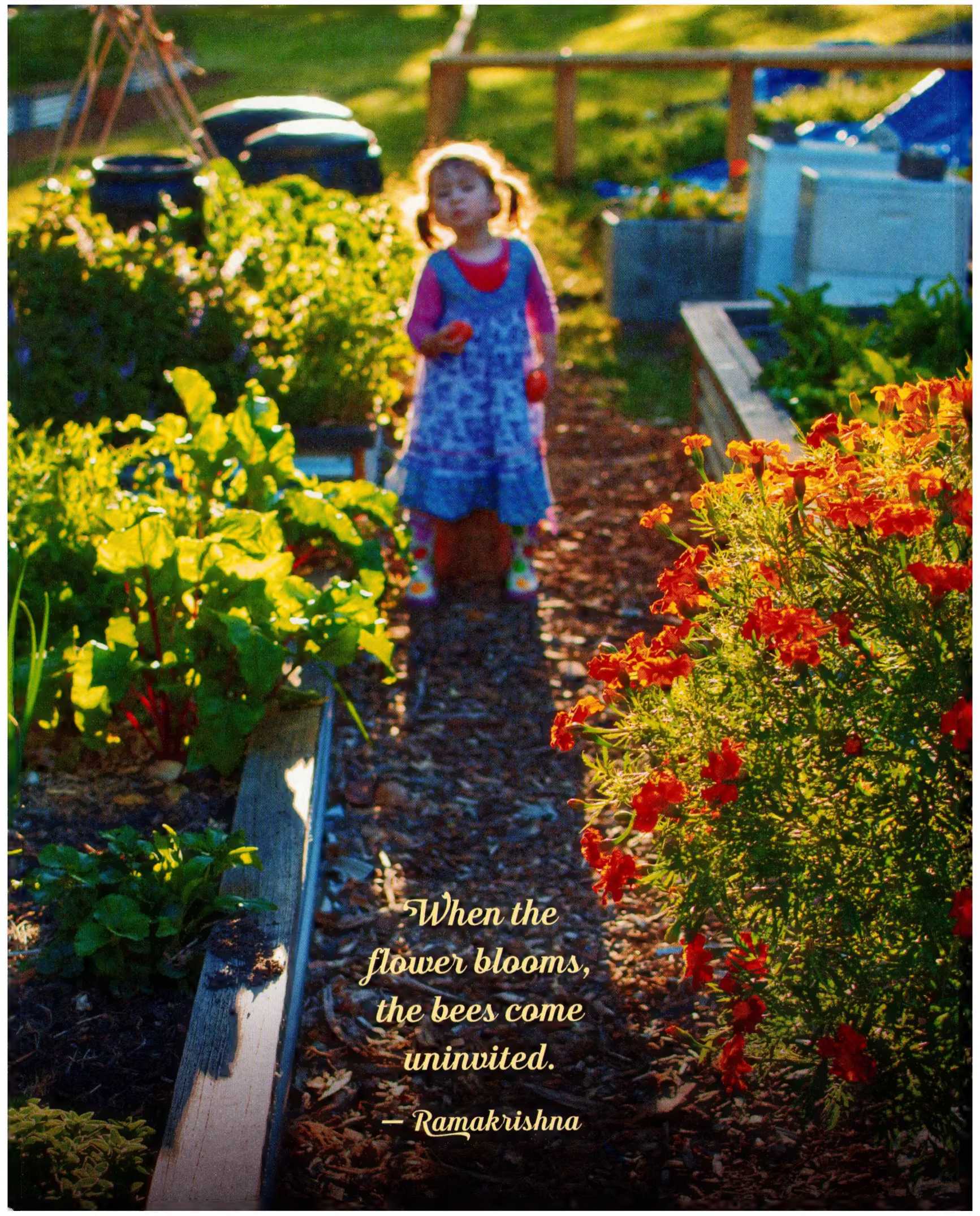


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